PROSPECTIVE PAYMENT
ASSESSMENT COMMISSION

REPORT AND RECOMMENDATIONS TO THE CONGRESS

MARCH 1, 1995

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MARCH 1, 1995

PROSPECTIVE PAYMENT ASSESSMENT COMMISSION

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The Prospective Payment Assessment Commission, created in 1983 by the legislation that established the Medicare prospective payment system for inpatient hospital services, advises the Congress and the Secretary of Health and Human Services on policies affecting Medicare payments to hospitals and other facilities. The Commission also studies industrywide effects of Medicare policies and important trends in the health care delivery system. On March 1 of each year, the Commission submits a report to the Congress with recommendations for improvements in Medicare policies and related subjects.

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March 1, 1995

The Honorable Al Gore
President of the Senate
United States Senate
Washington, D.C. 20510

Dear Mr. President:

I am hereby transmitting to the Congress the annual report of the Prospective Payment Assessment Commission as required by Section 1886(e)(3) of the Social Security Act as amended by Public Law 101-508. This report presents a discussion of the evolving health care system and provides the views of the Commission regarding the effects of these changes on health care financing and delivery. In addition, 13 recommendations concerning Medicare payment policies are included. The report reflects the Commission's collective judgment about issues of substantial importance to beneficiaries, hospitals, other providers, and the Medicare program.

Sincerely,

Stuart H. Altman, Ph.D.
Chairman

Enclosure

Prospective Payment Assessment Commission

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March 1, 1995

The Honorable Newt Gingrich
Speaker of the House
United States House of Representatives
Washington, D.C. 20515

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Sincerely,

Stuart H. Altman, Ph.D.
Chairman

Enclosure

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Prologue

The Changing Health Care Environment: The Commission's Views

Prologue

The Changing Health Care Environment: The Commission's Views

Medicare's payment policies must be considered in the context of changes occurring in the financing and delivery of health care. Among the most significant of these are the growth of capitated payment methods and managed care techniques in the private insurance market, together with continuous medical advances that allow the movement of services out of acute inpatient hospital settings. Important factors contributing to these developments include constraints on payments from private payers and increased competition among providers and payers.

The share of total health care spending devoted to acute inpatient hospital care continues to decline as per capita utilization decreases and as more services are furnished in ambulatory, post-acute, and other non-hospital settings. This reduced use of inpatient hospital services is creating excess capacity and greater competition for patients. Many private payers are taking advantage of this situation to negotiate lower payments for inpatient services. To maintain occupancy, hospitals are granting larger discounts to health plans and assuming greater financial risk in their relationships with insurers. Hospitals are also responding to competitive pressures by consolidating and developing integrated delivery systems in an attempt to maintain market share and control over their revenues. The development of new arrangements among insurers, providers, and physicians is altering longstanding financial incentives and the patterns of care furnished to all patients.

Medicare has developed policies that curb its spending by controlling its payment for each unit of service furnished. In the early 1980s, Medicare expenditures per enrollee were growing more rapidly than private health expenditures per insured person. Following implementation of Medicare's prospective payment system (PPS) for inpatient hospital care and subsequent constraints on payment for other services, this pattern reversed, with Medicare spending growing less rapidly than that in the private sector. More recently, Medicare expenditures per enrollee have again escalated, while private spending growth has continued to decline. Medicare's predominantly fee-for-service payment methods contain strong incentives to increase the number and intensity of services furnished. Much of the recent acceleration in Medicare spending is due to the rising number of beneficiaries receiving services and the number of services provided to each.

Changes in the financing and delivery of health care services have the potential to make the health care system more efficient and to control the rise in spending for medical care. At the same time, however, these changes may have important consequences for Medicare beneficiaries. The effects of heightened competition in the health care sector must be considered as Medicare updates and modifies its payment policies, and as the program considers methods to constrain the rapid increase in the volume of services furnished to its enrollees.

In this prologue to its annual report to the Congress, the Prospective Payment Assessment Commission (ProPAC) presents its views on important interactions between Medicare policies, increased competition, and restructuring in the financing and delivery of medical care. The Commission brings this information to the attention of the Congress and the public as a series of alerts concerning important implications these changes have for the Medicare and Medicaid programs.

Alert 1: Controlling the Growth in Medicare Spending

A significant portion of the growth in Medicare expenditures is due to increases in the number of Medicare enrollees and their greater use of

services. Substantial reductions in the rise in Medicare spending cannot be achieved solely by lowering payments to providers for each unit of service furnished. Over the long term, fundamental changes in the program are needed to control the rise in the volume of services in order to curtail spending to desired levels.

- Medicare continues to rely primarily on fee-for-service payment policies, based on the type of provider. These policies encourage increases in the number and types of providers as well as the volume of services furnished. To curb the overall rise in spending, the Medicare program must control both the total number of services furnished over an episode of illness and the payment for each unit of service.

- Medicare has lagged behind the private sector in encouraging prevention and health promotion activities, including self-help and education programs. Such initiatives might improve the health of Medicare beneficiaries, as well as reduce utilization of acute and post-acute health care services.

- About 25 percent of the projected rise in real (inflation-adjusted) Medicare spending over the next five years is due to continued growth in the number and average age of Medicare enrollees. A portion of the remaining anticipated increase is accounted for by growth in payments per unit of service above the level of inflation. The largest contributor to the expected escalation in spending, however, is an increase in both the percentage of enrollees receiving services and the number of services they receive.

- Changes in Medicare payment policies over the past decade have controlled the growth in payment per hospital admission. During this time, Medicare spending for hospital acute care inpatient services rose less than spending for services furnished in other settings. Recently, the growth in inpatient hospital expenditures has gone up modestly as admissions again have begun to rise.

- Since 1988, Medicare spending for post-acute services furnished by skilled nursing facilities, home health agencies, and rehabilitation and long-term care hospitals has grown rapidly. Primarily responsible for this is the rapid growth in the volume of services furnished, reflecting increases in the number of beneficiaries served and in the quantity and intensity of services provided to each beneficiary. Spending for hospital outpatient and end-stage renal disease dialysis care also is accelerating, driven by utilization growth.

Alert 2: Strengthening Medicare's Managed Care Risk Contracting Program

Enrollment of Medicare beneficiaries under managed care risk contracts has lagged behind that in the private sector. Certain features of Medicare's risk contracting program appear to discourage some plans from participating and others to deter beneficiaries from enrolling. Low enrollment and flaws in the program limit potential Medicare savings.

- Enhancing the opportunity for Medicare beneficiaries to select the risk contracting program and improving the program's payment methods could help slow spending growth. Risk contracting will be increasingly important as people now in health maintenance organizations (HMOs) want to stay enrolled as they age into Medicare. The number of individuals likely to find this option desirable may grow with the rise in private sector enrollment in HMOs and preferred provider organizations.

- Medicare's payment under the risk contracting program is based on the adjusted average per capita cost (AAPCC) of furnishing care to fee-for-service beneficiaries in the enrollee's county of residence. Linking the level of the capitated payment directly to the level of Medicare spending in the fee-for-service sector fails to correct for differences in practice patterns and service utilization between the two sectors. This limits the program's ability to constrain spending growth.

- The AAPCC also lacks an adequate risk adjustment. Consequently, HMOs have an incentive to avoid higher-cost, sicker beneficiaries. The ability of HMOs to select low-cost, healthier enrollees can eliminate the savings from the risk contracting program, and in fact may increase Medicare spending as a recent evaluation indicated. In addition, Medicare's policy of allowing beneficiaries to disenroll on a monthly, rather than annual, basis may contribute to biased selection. It could also disrupt the continuity of care.

- Determining the AAPCC annually on a county basis results in substantial payment variation among neighboring counties and from year to year. As a result, many HMOs are discouraged from participating in the risk contracting progam because of low payments in their service areas and payment variability from one year to the next. In addition, the AAPCC methodology does not account for the costs of services provided to Medicare beneficiaries by Department of Veterans Affairs and other military facilities. Consequently, Medicare capitated payments in some areas may be inappropriately low, further discouraging HMO participation.

- The Medicare program needs to provide beneficiaries with more information regarding available plans and how they compare. This information should include findings regarding the quality of care delivered to beneficiaries by HMOs in their area and data on enrollee satisfaction with alternative plans.

Alert 3: Changing Patterns of Subsidies Across Payers and Providers

A price competitive health care system will alter past patterns of subsidies across payers and providers. The ability of providers to cover losses from Medicare and Medicaid patients with excess revenues from private payers will diminish as competition intensifies.

- Hospitals have always used gains from some payers to cover losses from others. They have also relied on direct and indirect subsidies to help finance the care they furnish to the uninsured. These practices have spread rapidly in recent years. But as competition accelerates, payers will become less willing to finance these extra costs.

- Over the past decade, Medicare and Medicaid have curtailed the rise in their per case payments to hospitals. Instead of reducing cost growth as public payers constrained payments, however, hospitals responded by increasing revenue from private payers. In 1992, hospitals spent $26 billion more than they received for furnishing services to Medicare, Medicaid, and uninsured patients. In the same year, they took in $29 billion in revenue above their costs of providing care to privately insured patients. Because hospitals could get additional revenue from private payers, Medicare was able to slow payment growth without a commensurate decrease in the cost of furnishing care to its beneficiaries.

- Many hospitals will have difficulty securing extra revenues from private payers to subsidize losses from public programs because of accelerating price competition. To remain financially viable, therefore, they will have to constrain the growth in the costs of furnishing care to all patients.

- This deceleration in hospital costs per case began in late 1992. Contributing to this trend were improved labor productivity, smaller wage and salary increases, and a more gradual rise in the cost of supplies and services that hospitals purchase. In addition, hospital length of stay has declined for elderly and nonelderly populations alike. Consequently, growth in the average cost per case is moderating for Medicare and other payers.

- Medicare's payments relative to the costs of services provided to beneficiaries continue to be below those of most private payers. Because of the recent slowdown in cost growth, however, subsidies from private payers that offset these losses will not need to increase. Indeed, though still substantial, these subsidies appear to have dropped in 1994.

- Surplus revenue from private payers also has been used to subsidize losses from Medicaid and uninsured patients. If hospitals are unable to continue to obtain these additional revenues, they may avoid providing care to some public program beneficiaries and to the uninsured. Moreover, the pressure to do so is likely to rest most heavily on certain hospitals.

Alert 4: Assessing Further Reductions in Medicare Hospital Updates

While the growth in Medicare hospital per case payments can be reduced further, it is important

that this reduction be consistent with continued deceleration in total hospital costs. Unless that happens, access to care and the quality of care for beneficiaries will suffer.

- Since the third year of PPS, the annual update factor has been less than the rise in the market basket index, which measures the rate of inflation in the prices of goods and services hospitals purchase. Increases in inpatient hospital payments per case have been somewhat above the market basket. Hospital costs, however, have grown much faster than Medicare payments. As a result, Medicare payments are about 90 percent of the cost of care for its beneficiaries.

- Previous Federal constraints on payment updates have not affected the quality of services furnished to Medicare beneficiaries, since hospitals have been able to obtain sufficient revenue from private payers to cover continuing cost increases. This situation is changing as price competition in the private sector intensifies, leading private payers to curb the increase in hospital payments and hospitals to slow the rise in per case costs. Because it is unlikely that hospitals will be able to obtain additional revenue from private payers, further constraints on the PPS update factor and the rate of increase in payments should be consistent with the continued slowing in the growth of hospital costs.

- The financial condition of the average hospital continues to be good, although many individual hospitals are experiencing financial distress. One of the important factors determining the financial status of a hospital is its mix of patients and payers. Many Medicare beneficiaries rely on hospitals that also treat a large number of Medicaid patients and people without health insurance. Such facilities have limited ability to obtain surplus revenues from private payers to cover losses from the care of their other patients. The gap between public and private payments relative to costs disadvantages these hospitals in terms of their ability to maintain revenues and to compete with other hospitals. Additional across-the-board reductions in the PPS update factor would be hardest on those hospitals that treat the largest number of Medicare patients.

- The burden of furnishing care to a disproportionate share of Medicare and Medicaid patients and the uninsured is not spread equally across geographic areas or types of hospitals and other providers. Certain providers are less able to respond to reduced growth in public program payments. The beneficiaries served by these hospitals, therefore, may be particularly vulnerable.

Alert 5: Protecting Access to Hospitals That Care for Underserved Populations

Many Medicare beneficiaries rely on hospitals that are located in remote rural areas or that care for large numbers of the uninsured. The Medicare program has special payment provisions to assist these sole community and disproportionate share hospitals. Substantial reductions in these payments might adversely affect access to services for Medicare beneficiaries living in such areas. These payments, however, could be better targeted to hospitals that are truly isolated or that furnish a large share of uncompensated care.

- In many rural areas, there is only one community hospital available to provide emergency and routine care. Facilities in these areas frequently are confronted with special problems due to health work force shortages, low patient volumes, or other factors that limit their ability to control costs or effectively compete with other hospitals. The Medicare program has helped sole community hospitals through special payment policies to ensure that its beneficiaries have access to care.

- Many Medicare beneficiaries also rely on hospitals in underserved areas that furnish large amounts of care to the poor and the uninsured. These hospitals frequently have problems recruiting physicians and other staff, and meeting the special needs of their patients. Further, they tend to have a small share of privately insured patients, which limits their ability to subsidize losses from Medicare, Medicaid, and the uninsured. The extra revenue such hospitals receive from the Medicare program through disproportionate share payments helps to ensure reasonable access to care for enrollees in underserved communities. Reducing these payments to hospitals that are the only source of care in a community, without also expanding coverage to the uninsured or otherwise subsidizing their care, will adversely affect their financial viability. This, in turn, could threaten access for enrollees in public programs.

- Some facilities benefit from the payment provisions for sole community or disproportionate share hospitals even though they do not serve these special functions. It is possible, therefore, to target payment reductions to protect access for Medicare enrollees served by hospitals that are truly isolated or that have the largest shares of low-income patients.

Alert 6: Funding for Graduate Medical Education Programs

Medicare payments for the costs associated with graduate medical education programs have become a particularly important source of revenue for teaching hospitals in the absence of explicit financial support for these activities from other payers. This is especially true because increasing competition in the private sector is making it harder for teaching facilities to obtain the higher payment rates needed to cover the added costs of their graduate medical education programs. Nevertheless, the Commission believes it is possible to reduce Medicare's graduate medical education adjustment by about 40 percent over the next three years.

- Many Medicare beneficiaries rely on hospitals that maintain postgraduate education and training programs for physicians and nurses. These hospitals incur additional indirect patient care costs related to their teaching mission. They also have direct costs due to resident salaries and benefits, faculty supervision, and overhead. The added costs of maintaining teaching programs have been explicitly recognized by the Medicare program and implicitly recognized through higher payment rates by some private payers.

- As competition in the health care system intensifies, the additional costs borne by teaching hospitals will place them at a disadvantage relative to other facilities. The role, scale, function, and number of these institutions increasingly will be challenged. In the absence of alternative methods for financing medical education, patient care revenues will continue to be the major source of support for these activities.

- Medicare's indirect and direct medical education payments are an important source of revenue for this group of hospitals. The level of the indirect medical education adjustment, however, exceeds the added costs of furnishing care to enrollees. The Commission has recommended reducing payments to reflect only the difference in patient care costs that is related to teaching intensity. Doing this over three years will achieve the ultimate objectives of the Medicare program, while allowing teaching hospitals to adjust to the changing health care environment. In addition, direct graduate medical education payments have risen with the growth in the number of residents. Further evaluation of these payment policies is necessary, including better understanding of the value of training an increasing number of residents and the wide variation in per resident costs across hospitals. Medicare should also examine the relationship between its payments to teaching physicians for services provided to beneficiaries and its payments to facilities for graduate medical education.

- Because of Medicare's teaching and disproportionate share payments, the PPS financial performance of major teaching hospitals is better than that of any hospital group. Partly because of the significant amount of uncompensated care that many furnish, however, their overall financial health ranks among the poorest. The magnitude, distribution, and timing of any change in Medicare payments to these hospitals should take this into account.

- Medicare's capitated payment under its managed care risk contracting program does not appropriately distribute payments for the costs of teaching programs or of caring for a disproportionate share of low-income patients. The capitated rate reflects the extra Medicare payments provided to teaching and disproportionate share hospitals in the fee-for-service sector, regardless of whether Medicare HMO enrollees receive care in those hospitals. The relationship between HMOs and the teaching and disproportionate share hospitals in their service area warrants further evaluation.

Alert 7: Changing the Medicaid Program Through Demonstration Waivers

Many state Medicaid programs are using research and demonstration waiver authority to replace traditional fee-for-service payment systems with capitated, managed care arrangements. Some states are using savings from enrolling the Medicaid population in managed care to cover additional individuals. These state initiatives have the potential to slow spending growth per enrollee and enhance continuity of care. However, oversight of enrollment, service patterns, and quality of care is necessary to protect the Medicaid population from unscrupulous plans and providers.

- Demonstration programs that enroll all of a state's Medicaid recipients in managed care plans represent a significant change for this vulnerable population. Capitated payment systems contain strong incentives to control the volume of services furnished. Converting Medicaid from a fee-for-service to a capitated, managed care system, therefore, can slow the rise in spending per enrollee. Capitated payment methods may also improve quality by promoting continuity of care, increasing the availability of primary care providers, and encouraging the appropriate use of other needed services. These programs, however, limit recipients' choice of providers and may alter covered benefits.

- Currently, eight states have statewide Medicaid research and demonstration projects authorized under section 1115 of the Social Security Act. Nine other states have waiver applications that are pending authorization. Section 1115 projects allow states to receive Federal Medicaid matching funds for the existing Medicaid population and others who become eligible under the terms of the demonstration. Because the projects are authorized under demonstration authority, some of the Medicaid program regulations are waived. States may alter provider reimbursement requirements, such as disproportionate share payments to hospitals and cost reimbursement for federally qualified health centers. Further, voluntary disenrollment and certain plan participation conditions may be waived. This is in contrast to the freedom of choice waivers authorized under section 1915(b), which allow states to enroll selected recipients in managed care programs for limited periods. Consequently, the 1115 projects are altering the eligibility, benefit, service delivery, and regulatory oversight of the Medicaid program in states with waivers.

- State demonstration projects using managed care approaches for Medicaid enrollees may expand the availability of Medicaid coverage to otherwise uninsured groups and improve the continuity of care for those who are already enrolled. These projects, however, must be carefully evaluated for any adverse effects on these vulnerable populations, including the impact of how restricting provider choice and changing benefit design would affect quality of care.

- The effects of these changes on providers that have traditionally cared for these populations should also be monitored. Many participating states are redistributing disproportionate share payments through capitated rates for recipients. Consequently, hospitals that historically have served many poor patients may lose these extra payments. Managed care plans also may reduce their payments to these hospitals or choose other providers. Using savings from enrolling recipients in managed care to expand coverage for the uninsured, however, may provide additional revenue to these hospitals. The effects of changes in revenue on the ability of this important group of hospitals to care for Medicaid enrollees and the remaining uninsured population must be assessed. The impact of Medicaid waivers on access to care for individuals who have traditionally relied on rural health clinics, federally qualified health centers, and other providers that serve vulnerable populations should also continue to be examined.

Alert 8: Protecting Vulnerable Populations' Access to Services

In response to the increasingly competitive environment in which they operate, health plans, hospitals, and other providers are developing comprehensive, integrated financing and deliv-

ery systems to strengthen their market position and improve their efficiency. Access to care may decline for people without insurance, insured individuals living in underserved areas, and those with special needs if the providers they have traditionally relied upon cannot survive in the changing marketplace.

- A competitive insurance and delivery system contains strong incentives to enroll healthy, low-cost subscribers and to avoid the sickest, most costly patients and the providers that traditionally have served them. To protect quality and access for vulnerable populations, the premiums paid to plans or insurers must appropriately reflect the risk of their enrollees. Adequate risk adjustment of premiums would also improve the management of patient care and service delivery.

- Capitation and managed care techniques may be effective, in part, because they limit an individual's choice of and access to providers. People with special needs and those living in medically underserved areas, however, may be vulnerable because of these constraints on access. Plans should ensure that all their enrollees have reasonable access to basic services in their community and appropriate referrals to specialty services.

- A highly competitive health care financing and delivery system can control expenditure growth by consolidating the delivery of services and reducing excess capacity. Competition, however, will also limit the ability of providers to subsidize the care furnished to the uninsured. Consequently, access to care for the insured and uninsured alike may decline if consolidation leads to the closure of providers that serve large numbers of uninsured persons. In addition, extensive concentration in the health care system could restrict its capacity to provide certain types of services, require patients to travel too far, and reduce access to appropriate care for certain populations.

- The changing structure of the financing and delivery system creates new challenges for the legal system. Competition can help control health care spending through price reductions, consolidation, and increased efficiency. At some point, however, excessive concentration may reduce effective price competition.

Chapter 1

Medicare and the Evolving Health Care System

Chapter 1

Medicare and the Evolving Health Care System

America's health care system is undergoing a transformation, resulting from spending that consistently has risen much faster than can be explained by population growth and general inflation for the past three decades. A major restructuring in the financing and delivery of care is under way that will have lasting effects on how care is provided to the entire population, including Medicare beneficiaries. Before looking at the changes, however, it is important to understand the context in which they are taking place.

Among the factors contributing to higher health care spending are greater demand for services and the development, diffusion, and use of medical and technological advances. Not only are people receiving more services, but these are of higher intensity. The utilization spiral historically has been fueled further by the nature of health care financing, characterized by third-party insurance coverage and fee-for-service payment. Providers traditionally have been paid on a per service basis, linking their revenues with the quantity of services they furnish. Health insurance has shielded consumers from the direct cost of service use.

The dynamics of the medical marketplace also differ from those in the markets for most other goods and services—and may help explain why costs have grown. In most markets, consumers choose the lowest-priced product of acceptable quality, but price has been less important in the health care sector, partly because of insurance. Additionally, physicians generally select the services provided; rarely—until recently—have they been held accountable for patient care costs. Further, hospitals and other providers have competed for patients based on the perceived quality of their products, rather than on price. Frequently, competition has entailed acquiring costly technologies, expanding capacity, and offering services and amenities with little attention to cost.

All this is changing. Recent trends indicate that the growth in health care spending is moderating. Competition among insurers and providers is increasing, with price becoming a more important consideration in health care purchasing decisions. Employers and other buyers of insurance are demanding lower premiums. Third-party payers are using capitation and other managed care techniques to constrain their costs by negotiating price reductions, sharing financial risk with providers, and controlling service use.

For a decade, Medicare has attempted to curb its expenditures by limiting the rise in payment for each service that is furnished. For example, Medicare policies control the payment for each hospital discharge as well as for each unit of service delivered by physicians and other providers. Nevertheless, program spending has continued to grow rapidly because there are more beneficiaries, and because the number of services each Medicare patient receives is rising.

The major restructuring of the financing of health care services will affect how health care is provided. Increased price competition, together with continued payment constraints by government payers, has the potential to slow the rise in health care spending by reducing excess capacity, eliminating services of little or no value, and enhancing overall system efficiency. Greater competition, however, can have adverse effects if insurance plans or providers attempt to control their costs by accepting only the healthiest individuals or by failing to provide appropriate services. People who are uninsured or at high risk for illness, those who cannot afford to travel to selected providers, and those living in underserved areas may be at a disadvantage in a highly competitive health care system. The providers that care for these vulnerable populations and those that furnish other socially valuable services, such as medical education, also may be disadvantaged.

In this chapter, the Prospective Payment Assessment Commission (ProPAC) examines the evolving health care marketplace and Medicare's role within that marketplace. Changes in health care financing and service delivery are described. Recent health care spending trends are presented, along with the relationship between Medicare's payment policies and those of other payers. The increased competition and restructuring occurring in the financing and delivery of medical care are likely to affect the rate of growth and the distribution of spending by the private sector and by government programs. These changes could, therefore, have important consequences for access, service use, and quality of care.

THE CHANGING HEALTH CARE MARKETPLACE

Between 1980 and 1993, national health care spending grew more than 250 percent, largely because of the financial environment in which health care services are delivered.[1] Insurers traditionally played a passive role in managing spending because they were able to increase insurance premiums. Employers—the predominant payers of health insurance premiums—either raised product and service prices or delayed wage increases or other benefits to pay for higher premiums.

As a result of this financial environment, hospitals and other providers have attempted to improve the quality of their services with little regard to the cost. Capital improvements and expansions, along with technological advances, have enhanced the quality of and access to health care. At the same time, however, they have contributed to the tremendous growth in health care spending—from 9 percent of the nation's domestic output in 1980 to nearly 14 percent in 1993.[2]

Payment methodologies also have played a significant role in the rise of health care expenditures. Providers historically have been paid based on their costs or charges for each unit of service. These cost-based and fee-for-service payment methods give providers incentives to increase the frequency, duration, intensity, and specialization of services, leading to growth in overall spending.

In the early 1980s, Medicare expenditures were outpacing those in the private sector. To contain spending, Medicare implemented several payment policy changes, most notably the prospective payment system (PPS) for inpatient hospital care. Under this system, hospitals generally receive a fixed payment for each patient discharge, regardless of the amount or duration of services provided. PPS helped contain the growth in inpatient expenditures, thereby reducing the increase in total program spending.

Medicare's PPS, together with a decline in hospital admissions, resulted in an initial slowdown in overall hospital expenditures. This phenomenon was temporary, however, due to the relative lack of spending controls by other payers. While PPS constrained Medicare inpatient hospital payments, hospital costs continued to grow at historical rates. As their costs increasingly exceeded Medicare payments, many hospitals generated larger revenue surpluses from private insurers, a practice commonly referred to as cost shifting. Because they were able to cost shift, many health care providers did not have to confront financial pressures imposed by Medicare and some other payers. Cost shifting also meant that the constrained growth in Medicare payment rates generally did not impede access to or quality of care for Medicare beneficiaries.

Medicare's inpatient hospital payment policies hastened the decline in hospital admissions and length of stay; technological advances also contributed to this trend. An increasing number of services are provided in other sites, such as hospital outpatient and ambulatory settings, post-acute facilities, and the home. These factors have contributed to an overall excess in hospital inpatient capacity.

Recent trends indicate that price is becoming a more important consideration in health care purchasing decisions. Many of these changes began during the 1980s, but they have accelerated recently. This may be attributable to various factors, including a growing share of employers' dollars being spent for health care benefits, as well as a greater awareness of spiraling health care spending, highlighted during the 1994 debate on national health care reform.

Financial Constraints

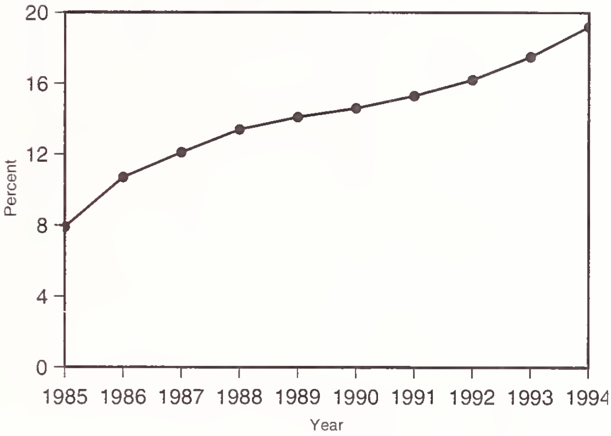
The growth in health care expenditures is causing many buyers (primarily employers) to seek insurers or benefits managers that offer health benefit packages at lower premiums. Insurers are implementing new strategies to contain spending by controlling the payment per unit of service, as well as the total number of services furnished. These approaches include converting provider payment methodologies from fee for service to more comprehensive payment units—such as per day and per case or per capita—and implementing utilization review programs. Consequently, providers face different financial incentives, as they bear more of the risk associated with health care cost increases.

Many health care purchasers are turning to managed care plans, which often have lower premiums than conventional indemnity plans. The term managed care encompasses a variety of arrangements, but all rely on restricting the choice of health care providers and limiting clinicians' options to prescribe treatments. Common plan types include health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point-of-service plans.

Managed care plans use various techniques to control their costs. Subscribers are limited in their choice of providers or given strong financial incentives to choose particular providers. By specifying doctors and hospitals, managed care plans can negotiate favorable payment rates and select providers that demonstrate lower-cost practice patterns. Further, plans may share financial risk with providers by using capitated payment arrangements or, in the case of hospitals, a per diem or per case payment. Other techniques include utilization review mechanisms and requirements that all specialized services be preauthorized by a primary care practitioner. Many managed care plans encourage preventive services to detect or avoid future costly conditions. Some control costs by acquiring hospitals and employing physicians so that they can provide services directly to subscribers.

The number of people enrolled in some form of managed care is growing rapidly. Enrollment in HMOs—the most tightly controlled managed care arrangement—more than doubled between 1985 and 1994, from 8 percent of the population to about 19 percent (see Figure 1-1). While HMO membership is expanding at the national level, HMO market penetration varies widely at the state level. In California and Massachusetts, for example, almost 35 percent of residents belonged to an HMO in 1993, compared with Alaska, West Virginia, and Wyoming, where there was virtually no HMO activity.[3]

Figure 1-1. U.S. Population Enrolled in Health Maintenance Organizations, 1985-1994 (In Percent)



Note: Data for 1985-1988 are reported as of June 30; data for 1989-1993 reported as of December 31; 1994 data are estimated as of December 31, 1994.

SOURCE: Group Health Association of America, *Patterns in HMO Enrollment*, June 1994, and the Department of Commerce, Bureau of the Census.

Enrollment in PPOs and other types of managed care also is accelerating. PPO subscribers generally have more choice of providers, although they are encouraged to use particular ones through financial incentives. In firms with 100 or more employees, PPO enrollment rose from 16 percent of all insured workers in 1991 to 26 percent in 1993.[4] Similarly, PPO enrollment for workers in smaller firms went up from 13 percent to 18 percent between 1990 and 1992.[5] Data on other forms of managed care are limited; however, anecdotal evidence suggests they are experiencing similar trends.

Managed care methods increasingly are affecting people who remain in fee-for-service indemnity insurance arrangements. Many indemnity insurance plans are incorporating utilization management features. In 1993, 90 percent of workers in firms with 100 or more employees were enrolled in fee-for-service plans that required certain services to be preauthorized by the insurer.[6]

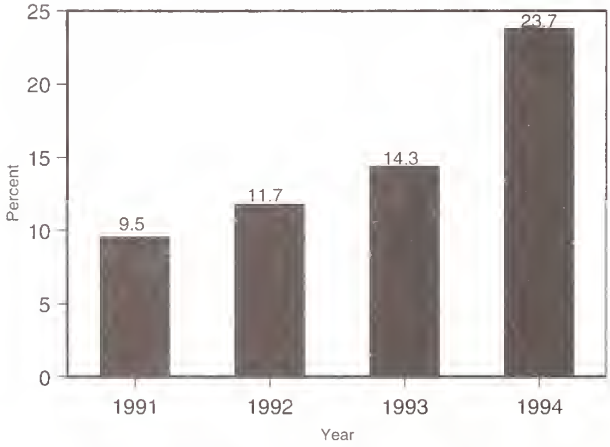
A growing number of states are attempting to control rising Medicaid expenditures by establishing managed care programs for Medicaid recipients. States generally need a waiver from the Federal government to implement such programs. Currently, 44 states and the District of Columbia have some type of managed care program in place, ranging from primary care case management to mandatory HMO enrollment.[7] These programs usually encompass specific geographic areas or populations, but several states have implemented statewide programs. The number of Medicaid recipients enrolled in managed care plans increased 66 percent between 1993 and 1994, from 4.8 million to nearly 8 million.[8] Managed care enrollment grew from almost 10 percent of the Medicaid-eligible population in 1991 to nearly 24 percent in 1994 (see Figure 1-2).

Provider Responses

Changes in the financing of health care are causing providers to reconsider how they do business. Confronted with intensified pressures to compete on the basis of price, they have three choices: control costs, increase volume in order to raise revenues, or both. Given changing financial incentives, the challenge for health care providers is to manage care delivery—and the resources used to provide that care—more effectively.

For hospitals, this is especially important. The combined growth in risk sharing arrangements, utilization review, and technological innovations has exacerbated the problem of excess capacity. Many services that previously were furnished on an inpatient basis are now being delivered in ambulatory settings. In addition, patients with conditions that require an inpatient stay are recovering in post-acute facilities and at home. The heightened demand for nonacute services has stimulated growth in the number and type of providers that compete for patients. Among these are hospital outpatient departments; free-standing ambulatory, surgical, and diagnostic imaging centers; rehabilitation facilities; and home health agencies. Insurers and managed care plans are capitalizing on the excess inpatient capacity to negotiate favorable prices for hospital services. Competition also is rising in other sectors, as private payers use managed care techniques to channel patients to selected physicians and other providers.

Figure 1-2. Medicaid Managed Care Enrollment, 1991-1994 (In Percent)



SOURCE: Health Care Financing Administration, Office of Managed Care.

To succeed in the increasingly competitive environment, hospitals and other providers are seeking ways to strengthen their market position. These methods range from developing outpatient and post-acute components to forming joint ventures with other providers and, in some cases, merging hospitals and entire hospital systems. The amount of collaboration between providers is widespread and unprecedented. The extent of this activity varies and often is directly related to the private sector market forces within an area. Each market differs, and these differences influence how providers respond to growing price competition. Areas heavily penetrated by managed care arrangements, for instance, are seeing more and more provider collaboration.

One of the more significant structural changes in the health care industry is the formation of integrated service delivery networks. These networks jointly market a comprehensive set of services to health benefit plans, insurers, or purchasers. They try to achieve savings through economies of scale and scope and the coordination of patient care.

Networks may include otherwise competing providers as well as those offering complementary or unrelated services. Besides physicians, they also may incorporate acute and post-acute facilities, other ambulatory-based providers, and, in some cases, an insurance component. By participating in networks, hospitals and other providers can compete more effectively for managed care contracts, thereby increasing their market share and improving their financial condition.

Quality and Access

Changes in the financing and delivery of health care services are likely to affect the type, amount, and quality of services people receive. Access to care for certain individuals, particularly those without insurance, may also be compromised in a price-competitive environment. An estimated 39.7 million Americans (15.3 percent of the population) lacked health insurance coverage during the 1993 calendar year, an increase of 1.1 million over 1992.[9] The amount and quality of services used by uninsured patients are lower than for the rest of the population. Uninsured persons visit a physician less often and have fewer hospitalizations despite their poorer health status.[10] Those who are hospitalized are sicker on admission; use fewer costly, discretionary services; and appear to have a higher risk of death, both in the hospital and after discharge.[11]

With rising price competition in the marketplace, these disparities could be exacerbated. As payers negotiate larger discounts from providers, those that serve a population made up predominantly of Medicaid enrollees and the uninsured will be increasingly disadvantaged. Fewer payers may be willing to finance care to the uninsured through cost shifting, and fewer providers may be willing to take on this financial burden.

Changes in the health care market are also likely to affect the care received by the insured population. Many studies have shown that HMO enrollees have different utilization patterns, compared with members of traditional indemnity fee-for-service health insurance plans. HMO enrollees have lower hospital admission rates and more physician office visits than non-enrollees.[12] It appears that managed care physicians substitute ambulatory care for at least a portion of inpatient care. In addition, these physicians provide less intensive care in both inpatient and ambulatory settings compared with their fee-for-service counterparts.[13] Despite differences in the patterns of care furnished, the quality of care and health outcomes do not appear to differ between HMOs and fee-for-service plans. Moreover, HMO consumer surveys indicate a high degree of satisfaction.

Some have argued that the lower utilization rates in HMOs and other managed care plans are due to favorable enrollee selection. Another explanation is the reliance on physician "gatekeepers" to authorize the use of specialty services and otherwise coordinate care. It is clear, however, that providers paid a predetermined amount for furnishing comprehensive services have incentives to minimize the quantity and intensity of those services. How this will affect the quality of health care in the future is not known.

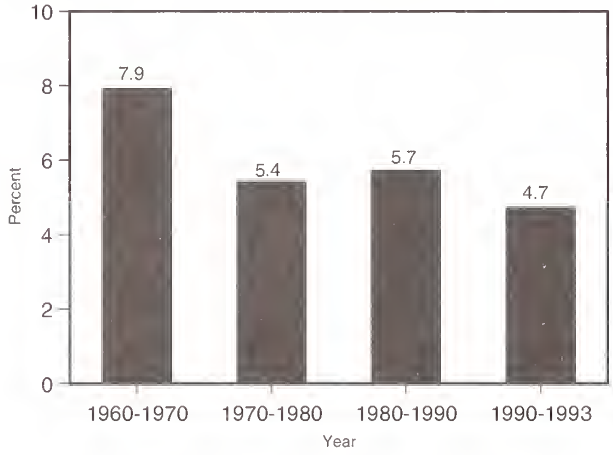
Research has documented wide variation in the use of health care services by various population groups.[14] While some of this variation may be appropriate—reflecting, for example, differences in patients' health status—much may be inappropriate and undesirable. To the extent that providers constrain needless use and control the intensity of services that do not improve patient outcomes or are furnished inefficiently, quality of care can be maintained or even improved. Providers can also improve quality and possibly avoid future use of expensive services through prevention and health promotion activities. The ability to identify inappropriate or inefficient service use, however, is limited. Most diagnostic and therapeutic interventions have not undergone rigorous evaluations of long-term outcomes that would allow targeted elimination or expansion of use.

HEALTH CARE SPENDING AND COSTS

Data on overall health care spending provide some indication of the impact of the changes in the health care marketplace. Recent trends suggest a slowdown in national health care spending over the past few years (see Figure 1-3). After accounting for inflation, between 1990 and 1993 national expenditures grew at an average annual rate of 4.7 percent, compared with 5.7 percent between 1980 and 1990 and 5.4 percent between 1970 and 1980.

Marketplace changes may also help explain why private sector spending per person has, in recent years, grown more slowly than Medicare's spending per enrollee (see Figure 1-4). Medicare expenditures grew faster than private sector spending in the early 1980s. This pattern reversed in 1984—following PPS implementation—and continued through 1991. In 1992 and 1993, however, Medicare expenditures again were growing faster than those in the private sector.

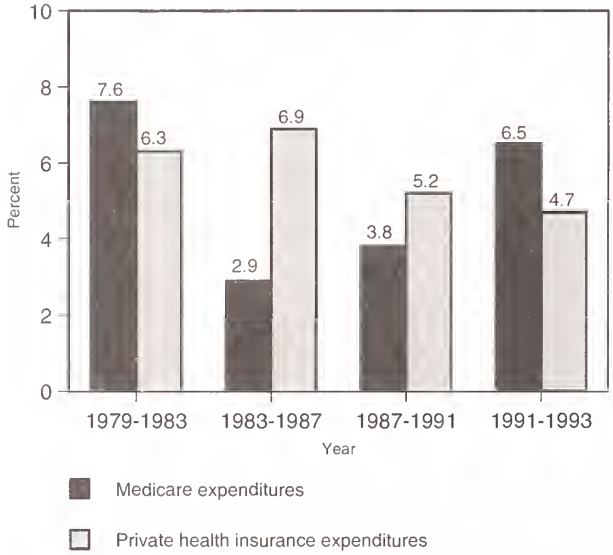
Figure 1-3. Real Average Annual Change in National Health Expenditures, 1960-1993 (In Percent)



SOURCE: ProPAC analysis of national health expenditure data from the Health Care Financing Adminstration, Office of the Actuary.

Spending growth rates for the different health care sectors have varied substantially in recent years. For example, overall hospital spending experienced the third lowest real increase since the beginning of the Medicare program, decelerating from an annual growth rate of 5.2 percent in 1992 to 3.6 percent in 1993.[15] Real spending for home health care continued growing the fastest—20.2 percent in 1993—although even this was lower than the 23.6 percent in 1992. Spending for physician services grew 2.8 percent after adjusting for inflation, compared with 4.5 percent in 1992.

Figure 1-4. Real Average Annual Change in Medicare Expenditures Per Enrollee and Private Health Insurance Expenditures Per Person, 1979-1993 (In Percent)



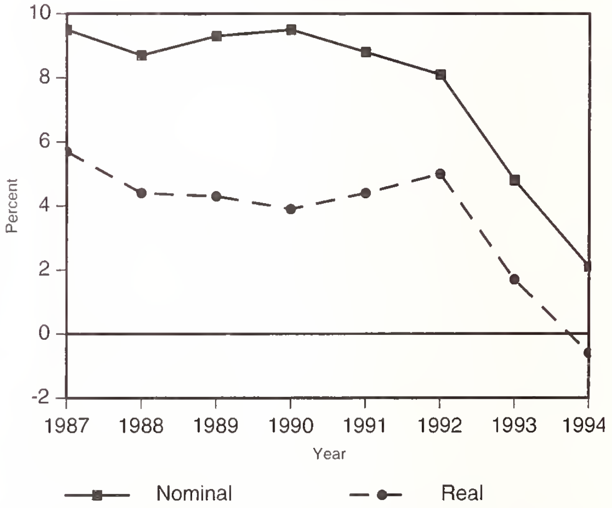
SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of the Actuary.

Hospitals

Inpatient hospital care represents the largest share of health care spending. Payment policy changes and technological advances, however, have shifted many procedures to ambulatory settings, resulting in lower hospital occupancy rates and excess capacity. Insurers and managed care plans are taking advantage of these factors to pursue price discounts. Consequently, many hospitals are being pressured to lower their prices to more competitive levels, necessitating lower cost growth as well.

The dramatic decline in the growth of hospital costs over the past two years suggests that hospitals are adjusting to their changing financial environment (see Figure 1-5). From 1987 until 1992, hospital costs per case grew about 9 percent annually. In 1993, the rate dropped to 4.8 percent. This trend appears to have continued into 1994, with costs

Figure 1-5. Annual Change in Hospital Costs Per Adjusted Admission, 1987-1994 (In Percent)



* Value for January - September 1994 compared with same months in 1993.

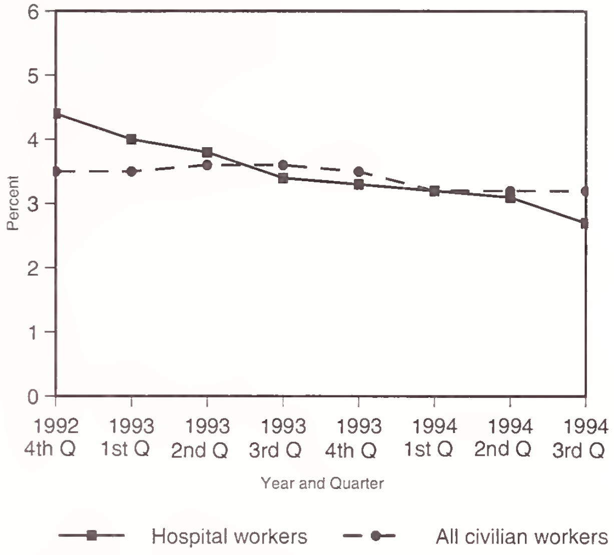
SOURCE: American Hospital Association National Hospital Panel Survey.

growing at a rate equivalent to 2.1 percent annually for the first nine months. The slowdown is even more striking when the effects of inflation are removed. Real cost growth fell from an annual rate of 5.0 percent in 1992 to 1.7 percent in 1993. In the first nine months of 1994, inflation-adjusted costs per case actually declined by 0.6 percent, compared with the same period in 1993.

Declines in average lengths of stay and slower employee wage growth appear to be key factors in the recent downward trend. After fluctuating slightly with no net change between 1985 and 1991, average length of stay fell 1.5 percent in 1992 (see Figure 1-6). This trend continued in 1993 and 1994, with additional stay reductions of slightly more than 3 percent in each year.

For many years, hospital wages grew faster than those for all civilian workers. This gap began to narrow in early 1993 (see Figure 1-7). By the end of that year, hospital wage increases fell below those in the rest of the economy. Since then, hospital wage growth has continued to slow. In the third quarter of 1994, average wages for hospital employees grew no faster than general inflation.

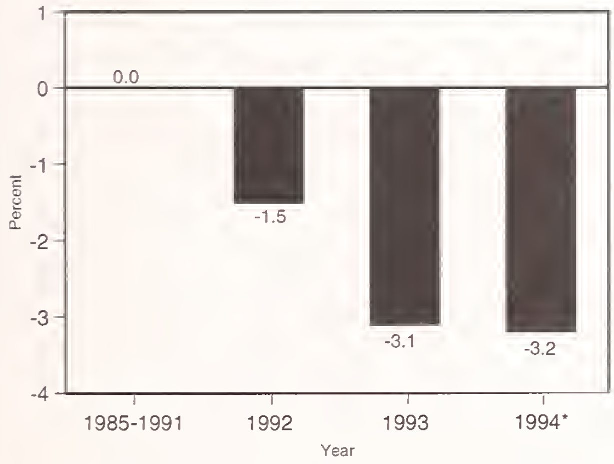
Figure 1-7. Change in Hospital Workers' and All Civilian Workers' Compensation, 1992-1994 (In Percent)



Note: Each period compared with the same period in the previous year.

SOURCE: Department of Labor, Bureau of Labor Statistics.

Figure 1-6. Average Annual Change in Length of Stay: 1985-1991 and 1992-1994 (In Percent)



* Value for January - September 1994 compared with same months in 1993.

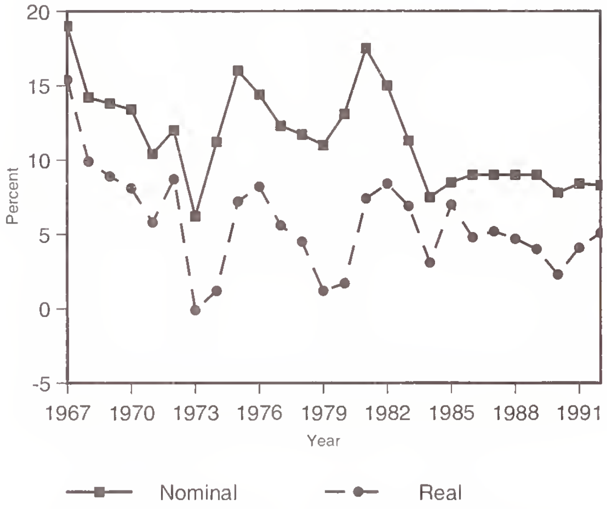
SOURCE: American Hospital Association National Hospital Panel Survey.

The recent downward trend in hospital cost growth is not unprecedented. Rates have slowed dramatically several other times during the past 25 years, each time in response to an explicit government policy or cost-containment initiative (see Figure 1-8). For example, the steep decline in 1973 coincided with the Nixon Administration's economic stabilization program. Decreases in the late 1970s and early 1980s corresponded with implementation of the Carter Administration's voluntary hospital cost controls and Medicare's prospective payment system for hospitals, respectively. In each of these periods, however, when the explicit pressure was withdrawn or lessened, the slowdown did not continue. Similarly, because comprehensive Federal health care reform seems unlikely in the immediate future, the pressure to slow cost growth could diminish. Nonetheless, many believe that today's trend differs from earlier ones because of changes in the private insurance market that appear to be accelerating, rather than subsiding. Moreover, because the impetus is based on the marketplace, there is a greater likelihood that the pressure will be sustained.

Other Facilities

While inpatient hospital care continues to represent the largest share of total health care spending,

Figure 1-8. Annual Change in Hospital Costs Per Case, 1967-1992 (In Percent)



SOURCE: American Hospital Association Annual Survey of Hospitals.

Table 1-1. Medicare Home Health Care Utilization, 1980-1994

	Persons Served		Visits	
Year	Number (In Thousands)	Per 1,000 Enrollees	Number (In Thousands)	Per Person Served
1980	726	26	16,322	22.5
1981	948	34	22,688	23.9
1982	1,154	40	30,628	26.5
1983	1,318	45	36,898	28.0
1984	1,498	50	40,422	27.0
1985	1,549	51	39,449	25.5
1986	1,571	51	38,000	24.2
1987	1,544	49	35,591	23.1
1988	1,582	49	37,132	23.5
1989	1,685	51	46,199	27.4
1990	1,940	58	69,565	35.9
1991	2,223	65	100,044	45.0
1992	2,523	72	134,844	53.4
1993	2,900	81	173,953	60.0
1994*	3,220	88	209,149	65.0

* Estimated

SOURCE: Health Care Financing Administration, Office of the Actuary.

payment policies and technological advances have shifted the site of care for a growing number of services to ambulatory settings, driving up spending in this area. In 1984, for example, 15 percent of hospital care was provided on an outpatient basis. By 1993, this share had increased to 23 percent.[16] Hospital outpatient spending grew 290 percent between 1984 and 1993, while hospital inpatient expenditures went up 82 percent.[17]

Spending for post-acute services also has grown rapidly, as patients increasingly are transferred to skilled nursing facilities, rehabilitation and long-term hospitals, and the home to recuperate from inpatient services or to be treated for chronic conditions. The rising use of these settings may result from several factors, including private sector incentives to treat patients in less costly sites as well as changes in Medicare payment and coverage policies.

Volume continues to play a major role in the growth of spending by these other health care providers. This is best exhibited by examining Medicare spending for home health services (see Table 1-1). Increases in the number of people receiving home health care and the number of visits for each person are primarily responsible for the rising spending for this service. In 1980, for every 1,000 Medicare enrollees, 26 received home health services. This figure nearly tripled by 1993, while the number of visits received by each person nearly doubled. Much of this growth was associated with changes in coverage policies. Increases in the numbers of users and services provided per user also have driven much of Medicare's higher spending for skilled nursing facility care (see Table 1-2). Dialysis for end-stage renal disease and certain outpatient procedures demonstrate a similar—though less pronounced—pattern.

MEDICARE IN THE CHANGING MARKETPLACE

The changes in the health care marketplace will undoubtedly affect the Medicare program. Medicare is a major player in the health care arena, responsible in 1994 for the health care services of some 36 million people at an annual cost of about $150 billion.[18] Although the program's payment policies are distinct from those of private payers, the cost of providing care to Medicare beneficiaries—particularly for hospital services—has been linked to private sector payments through cost shifting. Financial constraints in the private sector may affect this relationship. In addition, there is an increasing divergence between Medicare's payment

Table 1-2. Medicare Skilled Nursing Facility Utilization, 1980-1994

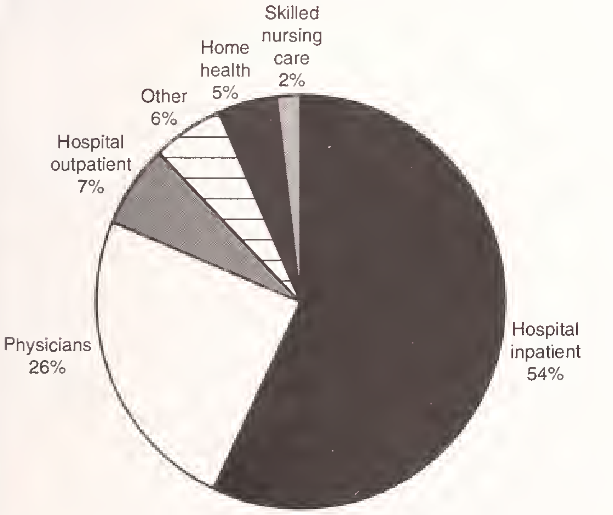
	Persons Served		Days	
Year	Number (In Thousands)	Per 1,000 Enrollees	Number (In Thousands)	Per Person Served
1980	257	9	8,645	33.6
1981	251	9	8,518	33.9
1982	252	9	8,814	35.0
1983	265	9	9,314	35.1
1984	299	10	9,640	32.2
1985	314	10	8,927	28.4
1986	304	10	8,160	26.8
1987	293	9	7,445	25.4
1988	384	12	10,667	27.8
1989	636	19	27,780	43.7
1990	638	19	25,200	39.5
1991	671	20	23,700	35.3
1992	785	22	28,960	36.9
1993	870	24	34,437	39.6
1994*	925	25	36,865	39.9

* Estimated.

SOURCE: Health Care Financing Administration, Office of the Actuary.

structure and those of a growing number of private payers. While Medicare offers its enrollees a managed care option, its primary payment method continues to be fee for service. The style of care provided to Medicare beneficiaries may change as providers alter their practice patterns to meet the incentives of a health care environment dominated by managed care.

Figure 1-9. Share of Total Medicare Spending, by Sector, 1991 (In Percent)



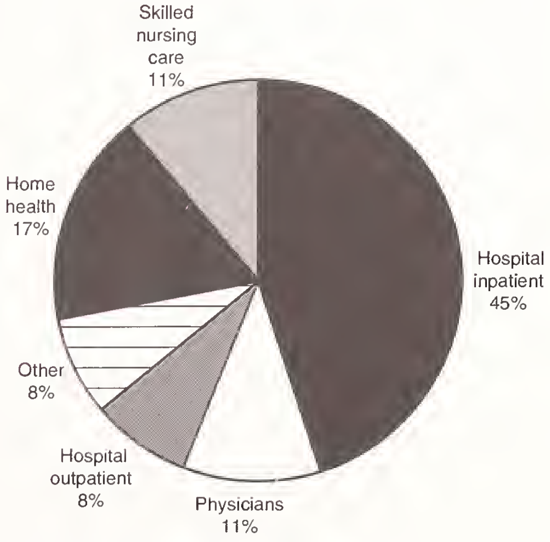
SOURCE: Health Care Financing Administration, Office of National Health Statistics.

Medicare Spending

The Medicare program is experiencing shifts in spending across provider types similar to those seen in the overall health care system. Although hospital inpatient payments continue to be Medicare's largest outlay, skilled nursing care and home health services account for disproportionate shares of overall Medicare spending growth (see Figures 1-9 and 1-10). In 1991, expenditures for skilled nursing care and home health services constituted 2 percent and 5 percent of total Medicare spending, respectively, yet they represented 11 percent and 17 percent of the increase in total Medicare expenditures between 1991 and 1993.

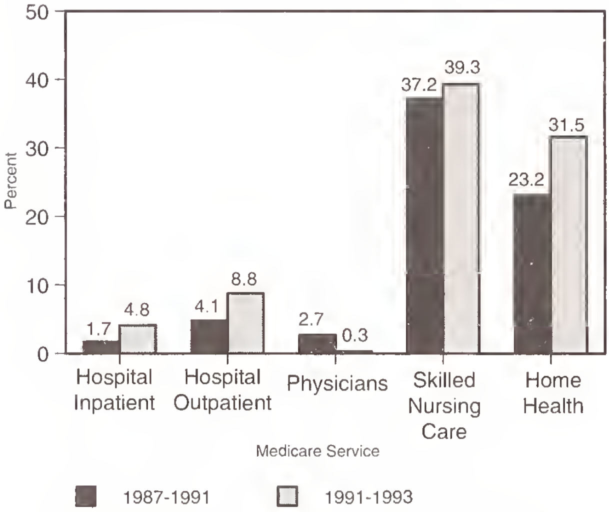
This significant shift in Medicare spending shares results from sustained spending increases for post-acute services. Between 1991 and 1993, real expenditures per enrollee for skilled nursing care rose almost 40 percent per year; those for home health care services grew just over 30 percent annually (see Figure 1-11). These growth rates reflect a combination of technological advances, modifications

Figure 1-10. Contributors to Increase in Medicare Spending, by Sector, 1991-1993 (In Percent)



Note: Increase in total Medicare expenditures = 25.4 percent.
SOURCE: Health Care Financing Administration, Office of National Health Statistics.

Figure 1-11. Real Average Annual Growth Rates Per Enrollee for Selected Medicare Services, 1987-1993 (In Percent)



SOURCE: ProPAC analysis of data from the Health Care Financing Administration, Office of the Actuary.

in physicians' practice patterns, and changes in Medicare's coverage policies. Further, even though Medicare's cost-based payment methodologies incorporate payment limits, they do not provide strong enough incentives to control costs.

Medicare's hospital payment policies are having an increasing impact on the financial condition of hospitals. Medicare represents a rising share of hospitals' total patient care. The number of Medicare enrollees is growing faster than the general population, and Medicare admissions per enrollee have not been decreasing as have those for the under-65 population. In 1980, Medicare revenues represented about 40 percent of hospitals' patient care costs; in 1992, this proportion rose to 43 percent.[19]

Future Medicare Hospital Payments and Costs

The slowdown in hospital cost growth, along with continued Federal budgetary pressures, has focused attention on further reducing the growth in Medicare payments for hospitals and other providers. As discussed earlier, for a number of years hospitals have offset increases in Medicare costs per case that exceeded Medicare payments by obtaining extra revenues from private insurers. In 1992, for example, Medicare payments were $11 billion less than the costs of treating program beneficiaries.[20] All of this deficit was offset by higher payments from private payers. Whether additional Medicare payment constraints can be imposed without exacerbating the pressure to cost shift depends on the rate of increase in both payments and costs.

PPS updates through fiscal year 1997 were set by the Omnibus Budget Reconciliation Act of 1993.[21] The actual payment increases received by hospitals, however, depend not only on these updates, but also on the growth in the Medicare case-mix index. ProPAC has estimated this increase to be 1.0 percent in fiscal year 1994 and 1.1 percent in fiscal year 1995. The Commission believes a level of 1.0 percent likely will be maintained through 1997 in the absence of major changes in the payment system.

Because it is impossible to predict whether the current cost slowdown will continue, ProPAC projected cost growth under three scenarios that it believes represent the range of likely increases in Medicare cost per case (see Table 1-3). A reasonable estimate of the upper end of the range after 1994 is 4.9 percent annually (equal to the projected increase in the PPS hospital market basket index plus 1.8 percentage points)—the level experienced in fiscal year 1992. This upper limit reflects the assumption that the combination of cost-containment pressure from the private sector and public concern about rising costs will prevent cost growth from escalating to the 8 percent to 9 percent level of the late 1980s.

The lower boundary on the future rate of cost increase is best represented by the cost growth through the first nine months of 1994, which was 2.1 percent.[22] In ProPAC's view, the hospital industry's response to these pressures is not likely to be any more intense in the future than it is today. Further, the current growth rate is actually less than inflation in the general economy. The intermediate range cost growth estimate for 1995 and beyond is based on the forecasted market basket increase plus an allowance for changes in the mix and complexity of hospital admissions. The Commission's best estimates of these variables through 1997 are 1.0 percent per year for real case-mix growth and 2.9 percent per year for the market basket increase.[23]

Table 1-3. Medicare PPS Per Case Payments Relative to Costs, Under Three Cost Growth Scenarios, Fiscal Years 1994-1997 (In Percent)

Variable	1994	1995	1996	1997	Average 1994-1997
Payment increase[a]	3.0%	3.1%	2.6%	4.2%	3.2%
Range of likely cost increase:					
High[b]	2.1	4.9	4.9	4.9	4.2
Intermediate[c]	2.1	3.8	4.0	4.1	3.5
Low[d]	2.1	2.1	2.1	2.1	2.1
Difference between payment and three alternative cost increases:					
High	-0.9	1.8	2.3	0.7	1.0
Intermediate	-0.9	0.7	1.4	-0.1	0.3
Low	-0.9	-1.0	-0.5	-2.1	-1.1

[a] Derived from the legislated update (which is the forecasted market basket increase less a prescribed number of percentage points) and ProPAC's estimate of case-mix index change.

[b] For 1994, based on the American Hospital Association National Hospital Panel Survey increase for the first nine months of 1994. For 1995 through 1997, assumes return to the per case increase in Medicare inpatient hospital costs experienced in fiscal year 1992.

[c] After 1994, based on the market basket increase (as forecasted by the Health Care Financing Administration in September 1994), plus increments for expected market basket forecast error correction and real case-mix growth (both as estimated by ProPAC).

[d] Assumes continuation of the 1994 experience.

SOURCE: ProPAC analysis.

The additional pressure to cost shift can be estimated by subtracting the Medicare payment increase from the cost increase each year. Medicare and the private sector account for approximately equal shares of hospital spending, 40 percent and 39 percent in 1992. Consequently, every percentage point of Medicare cost increase not reimbursed by the Medicare payment increase will, all else equal, translate into a percentage point of additional revenue needed from the private sector.

The unusually low 2.1 percent per case cost growth in fiscal year 1994 means that, for the first time since 1985, Medicare's payment increase will probably exceed the growth in costs. Further, if hospitals maintain cost growth at the current level for three more years, this situation would continue. Even under those circumstances, however, the difference between payment and cost increases is estimated at only 1.1 percentage points per year, so at best there could be only a modest reduction in the level of cost shifting from Medicare to the private sector. Moreover, pressures from rising uncompensated care losses, lagging Medicaid payment increases, and private sector payment constraint might prevent even this modest change from materializing. It should also be pointed out that even though the amount of cost shifting might be reduced slightly each year under this scenario, the amount hospitals spend to treat Medicare beneficiaries would still substantially exceed payments.[24]

If, alternatively, hospital cost growth follows the Commission's intermediate estimate, Medicare costs would continue to grow faster than payments. The uncovered cost increase would average about 0.3 percentage points annually from 1994 to 1997. This means that, to the extent private insurers would allow it, there would be additional cost shifting from Medicare to the private sector each year, and further reductions in the updates or other forms of scaling back payments would only exacerbate the problem. At the high end of the growth range for hospital costs, the legislated Medicare updates would increase the pressure to cost shift by 1.0 percentage point per year.[25]

The ability to use cost shifting to fill the revenue gap when Medicare cost increases exceed payment increases varies across hospitals. Facilities that treat larger shares of Medicare, Medicaid, and uninsured patients have a lesser ability to cost shift to the private sector. In view of growing price competition in the marketplace, these facilities will face a greater risk of declining margins, which eventually could threaten their financial viability and their ability to care for Medicare beneficiaries.

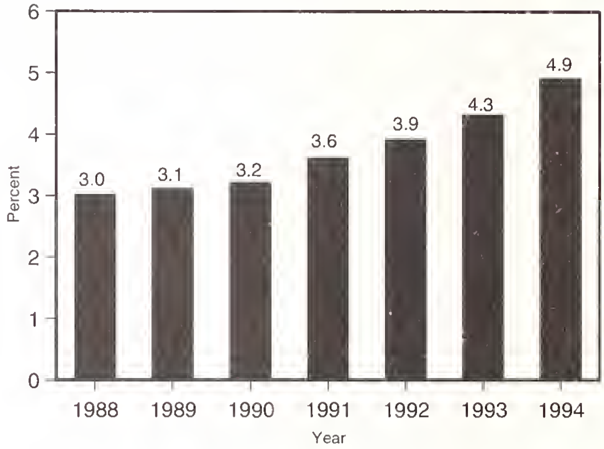
Medicare and Managed Care

The growth of managed care in the private sector may have implications for the Medicare program and its beneficiaries. Currently, the primary methods used by Medicare for financing and delivering care have different incentives than those inherent in managed care. Most Medicare beneficiaries have a large choice of health care providers, which are paid on a fee-for-service basis. By contrast, managed care is premised on a limited number of providers that share financial risk for patients' overall use of health care services. The private sector's increasing focus on managing patients' overall health service use, rather than on distinct service units, likely will influence providers' overall practice patterns. This, in turn, will affect the care provided to all patients, including Medicare beneficiaries.

Medicare beneficiaries have the option to receive their health care through HMOs, but enrollment growth lags behind that seen in the private sector. Medicare has offered at least one managed care option since its inception. Initially, however, plans were paid on the basis of their costs. In 1982, Medicare introduced the risk contracting program, which most resembles private sector managed care. Under this program—the largest of Medicare's managed care initiatives—Medicare pays HMOs a capitated rate that is based on estimated Medicare fee-for-service spending.

Beneficiary enrollment in risk contracting plans has risen slightly since the late 1980s, from 3 percent of the total Medicare population in 1988 to almost 5 percent in 1994 (see Figure 1-12). This is a much smaller proportion, however, than the 19 percent enrollment in similar arrangements in the privately insured population. Geographically, enrollment in risk contracting plans parallels that in the private sector. States with large private sector HMO enrollments also have high Medicare HMO penetration.

Figure 1-12. Medicare Beneficiaries Enrolled in Managed Care Risk Contracting Programs, 1988-1994 (In Percent)



SOURCE: Health Care Financing Administration, Office of Managed Care.

CONCLUSIONS

Increased price competition is causing fundamental changes in the financing and delivery of care. Insurers are negotiating larger discounts from providers and increasingly managing where their subscribers obtain services. The growth in managed care arrangements reflects a heightened interest in controlling overall expenditures. Providers are responding to these competitive pressures by reconfiguring their relationships with each other as well as with payers to try to boost their market share. Whether these changes will influence quality of care will depend on the extent of cost-containment efforts, the services that are affected, and the need for and effectiveness of those services.

The financial pressures in the health care marketplace already seem to be working. Health care spending shows signs of moderating. Further, after accounting for inflation, hospital per case costs actually declined in 1994. The distribution of expenditures across health care sectors also is shifting. The hospital inpatient setting accounts for a smaller share of total health spending, with utilization moving to less intensive sites such as ambulatory settings and post-acute care facilities. Even though services may be less expensive in these alternative sites, higher utilization is driving up spending.

Medicare has managed to control its hospital expenditures by limiting its payment updates through PPS. By relying on greater revenues from private payers, hospitals have, in aggregate, managed to offset increases in Medicare costs per case that exceeded payment increases. Two trends—greater price consciousness and slower hospital cost growth—will affect hospitals' ability and need to cost shift. If cost growth remains at the low levels of 1994, there could be modest reductions in the need for cost shifting. On the other hand, if costs grow at an intermediate level—between current and historical rates—cost-shifting pressures may continue to increase. There are concerns, however, that private payers will not continue to support even existing levels of subsidies. Particularly as payers receive larger discounts from providers and facilities compete to enlarge their market share, certain hospitals, such as those serving large numbers of Medicare, Medicaid, and uninsured patients, will be less able to rely on cost shifting to maintain their financial position.

Profound changes are taking place in the health care marketplace. It is too early to assess the impact of these changes, but there is one certainty. Restructuring the relationships among payers and providers will have a lasting influence on the way health care is delivered and financed in this country.

Notes to Chapter 1

1. Data provided by the Health Care Financing Administration, Office of the Actuary.

2. Ibid.

3. Data provided by the Group Health Association of America and the Department of Labor, Bureau of Labor Statistics.

4. "Employee Benefits in Medium and Large Private Establishments, 1991." Bulletin 2422, Department of Labor, Bureau of Labor Statistics, May 1993; and Department of Labor News Release, USDL: 94-477, September 30, 1994.

5. "Employee Benefits in Small Private Establishments, 1992." Bulletin 2441, Department of Labor, Bureau of Labor Statistics, May 1994; and "Employee Benefits in Small Private Establishments, 1990." Bulletin 2388, Department of Labor, Bureau of Labor Statistics, September 1991.

6. Department of Labor News Release, USDL: 94-477, September 30, 1994.

7. Under case management, a fee-for-service payment system is retained, but patients must obtain prior approval for specialized services from a primary care physician, who receives an additional fee to monitor an individual's service use.

8. Data provided by the Health Care Financing Administration, Office of Managed Care.

9. Bureau of the Census, "Statistical Brief: Health Insurance Coverage—1993," October 1994.

10. Chris Haffner-Eaton, "Physician Utilization Disparities Between the Uninsured and the Insured: Comparisons of the Chronically Ill, Acutely Ill, and Well Nonelderly Populations," *Journal of the American Medical Association* 269(6):787-92, February 10, 1993; Beth Hahn and Doris Lefkowitz, *Annual Expenses and Sources of Payment for Health Care Services,* National Medical Expenditure Survey Research Findings 14, AHCPR Pub. No. 93-0007 (Rockville, MD: U.S. Public Health Service, November 1992).

11. Jack Hadley, Earl P. Steinberg, and Judith Feder, "Comparison of Uninsured and Privately Insured Hospital Patients,"*Journal of the American Medical Association* 265(3):374-79, January 16, 1991; Joel S. Weissman and others, "Rates of Avoidable Hospitalization by Insurance Status in Massachusetts and Maryland," *Journal of the American Medical Association* 268 (17):2388-94, November 4, 1992; John Z. Ayanian and others, "The Relation Between Health Insurance Coverage and Clinical Outcomes Among Women with Breast Cancer," *New England Journal of Medicine* 329(5):326-31, July 29, 1993.

12. Albert L. Siu and others, "Use of the Hospital in a Randomized Trial of Prepaid Care," *Journal of the American Medical Association* 259(9):1343-46, March 4, 1988; Jane McCusker, Anne M. Stoddard, and Andrew A. Sorensen, "Do HMOs Reduce Hospitalization of Terminal Cancer Patients?" *Inquiry* 25(2):263-70, Summer 1988; Sheldon Greenfield and others, "Variations in Resource Utilization Among Medical Specialties and Systems of Care," *Journal of the American Medical Association* 267(12):1624-30, March 25, 1992; and Robert H. Miller and Harold S. Luft, "Managed Care Plan Performance Since 1980: A Literature Analysis," *Journal of the American Medical Association* 271(19):1512-19, May 18, 1994.

13. Mark C. Hornbrook and Sylvester E. Berki, "Practice Mode and Payment Method: Effects on Use, Costs, Quality, and Access" *Medical Care* 23(5):485-511, May 1985; Alan N. Johnson and others, "Differences in Inpatient Resource Use by Type of Health Plan," *Inquiry* 26(3):388-98, Fall 1989; Robert H. Brook and others, "Quality of Ambulatory Care: Epidemiology and Comparison by Insurance Status and Income," *Medical Care* 28(5):392-433, May 1990; and James P. Murray and others, "Ambulatory Testing for Capitation and Fee-for-Service Patients in the Same Practice Setting: Relationship to Outcomes," *Medical Care* 30(3):252-61, March 1992.

14. Sherman Folland and Miron Stano, "Small Area Variations: A Critical Review of Propositions, Methods, and Evidence," *Medical Care Review* 47(4):419-65, Winter 1990; Jose J. Escarce and others, "Racial Differences in the Elderly's Use of Medical Procedures and Diagnostic Tests," *American Journal of Public Health* 83(7):948-54, July 1993.

15. ProPAC analysis of data from the Health Care Financing Administration, Office of the Actuary. The two lower real increases were in 1984 and 1985, the first two years of PPS.

16. Data provided by the Health Care Financing Administration, Office of the Actuary.

17. ProPAC analysis of data from the Health Care Financing Administration, Office of the Actuary.

18. Data provided by the Health Care Financing Administration, Office of the Actuary.

19. Ibid.

20. ProPAC analysis of data provided by the American Hospital Association.

21. The updates are 2.0 percent in both fiscal years 1994 and 1995 and, based on current forecasts, estimated at 1.6 percent in 1996 and 3.2 percent in 1997.

22. Data from the American Hospital Association National Hospital Panel Survey covering January through September 1994.

23. The latest forecast of the increase in the PPS market basket index averages 3.5 percent from 1995 through 1997. However, in recent years the forecasts have turned out to be higher than the actual increase. Even though HCFA's forecasts have recently been revised downward, ProPAC believes they may still prove to be too high and thus lowered them by 0.6 percentage points each year for purposes of estimating future cost per case growth. The unadjusted forecast was used in estimating payment updates, however, in accordance with current law.

24. In 1992, $10.8 billion of Medicare losses were cost shifted to the private sector. Under the low cost growth scenario, this amount would have been reduced by only $0.7 billion, or 6.5 percent of the total.

25. If HMO penetration in the private sector increases dramatically over the next three years, hospital inpatient service use might decline because patients with less complex conditions would most likely be treated on an outpatient basis. While this would create savings in the private sector, it also would elevate costs per case because hospitals' fixed expenses (for example, equipment and management salaries) would have to be spread over fewer cases. Additionally, the remaining patient mix would be sicker and therefore costlier. This situation would increase the probability of the highest of the three per case cost growth scenarios occurring.

Chapter 2

Recommendations

Chapter 2

Recommendations

When the Prospective Payment Assessment Commission (ProPAC) was created by the Congress in 1983, its primary responsibility was to examine issues and make recommendations for updating and improving the Medicare prospective payment system (PPS). The Congress gradually has expanded ProPAC's mandate to include analyzing current payment policies for all facility services furnished to Medicare beneficiaries and developing policies for the future.

These broader duties include examining payment for hospital outpatient services, services furnished by skilled nursing facilities and home health agencies, and end-stage renal disease dialysis facilities. In addition, at the request of the Congress, the Commission has studied issues related to the adequacy of Medicaid hospital payment rates and the use of Medicare payment methods for other payers. ProPAC continues to devote substantial effort, however, to updating and improving payment for PPS hospitals and excluded facilities and distinct-part units.

Although this report is submitted to the Congress, the Secretary of Health and Human Services (HHS) is required to consider ProPAC's recommendations and respond to them in the annual notice of PPS rulemaking published in the *Federal Register*. The Commission is always pleased to work with the Secretary to provide additional analysis and information on its recommendations.

ProPAC's recommendations reflect the collective judgment of its 17 Commissioners. Some recommendations, such as the annual update factors, are reviewed every year. Others address new issues or modify previous recommendations. All incorporate recent research findings.

RECOMMENDATIONS FOR FISCAL YEAR 1996

The Commission's recommendations center on three areas:

- Updating payment rates,
- Improving PPS payment policies, and
- Strengthening hospital outpatient payment policies.

ProPAC's recommendations are intended to make Medicare's payments for health care services more equitable and effective. The recommendations on the updates reflect the Commission's views on aggregate spending levels. Refinements to the payment system and the distribution of Medicare PPS payments are the general focus of the next set of recommendations. Finally, the recommendations on outpatient payment policies address concerns about program and beneficiary payments for the rapidly growing volume of services provided in hospital outpatient departments.

Updating Payment Rates

The Commission is mandated by law to report to the Congress each year on the appropriate update to inpatient hospital payment rates under Medicare's PPS. As required, ProPAC considers several factors in developing its annual update recommendation: the hospital market basket index (which reflects the prices of resources hospitals use to provide inpatient care), scientific and technological advances (S&TA), hospital productivity, and the quality and long-term cost-effectiveness of health care. The Secretary of Health and Human Services is required to consider the Commission's recommendation in developing her update proposal. The actual update historically has been legislated by the Congress in the budget reconciliation process, often for several years in advance.

In the Omnibus Budget Reconciliation Act (OBRA) of 1993, the update to PPS operating payments was established for each fiscal year through 1997. For fiscal year 1996, the operating update for all PPS hospitals is set equal to the change in the hospital market basket index minus

2.0 percentage points. Even though the fiscal year 1996 operating update has been set by law, the Commission has continued its traditional approach of examining the individual factors that together determine the appropriate update to the PPS payment rates. ProPAC believes this approach results in a payment increase that is sufficient, in the context of the current health care financing system, to maintain Medicare beneficiaries' access to quality care while encouraging hospital efficiency in providing that care. (See Appendix A for an historical overview of the PPS update and its components.)

In addition to the operating update, the Commission recommends an update for the Federal capital payment rate. ProPAC also recommends an update for the hospital-specific rates that apply to sole community hospitals. The update for facilities excluded from PPS is also considered. Finally, ProPAC's recommendation for an update to the composite payment rate for dialysis services is presented.

Recommendation 1: Update Factor for Operating Payments to PPS Hospitals

For fiscal year 1996, the PPS standardized payment amounts should be updated to account for the following:

- **The projected increase in the HCFA PPS market basket index, currently estimated at 3.9 percent;**
- **An adjustment of zero percentage points to reflect the difference between the ProPAC and HCFA market baskets;**
- **A negative adjustment of 1.8 percentage points to correct for substantial error in the fiscal year 1994 market basket forecast;**
- **A positive adjustment of 0.3 percentage points to reflect the cost-increasing effects of scientific and technological advances;**
- **A negative adjustment of 0.3 percentage points to encourage hospital productivity improvements; and**
- **A net adjustment of zero percentage points for case-mix change in fiscal year 1995.**

This would result in an update factor of 2.1 percent.

This recommendation reflects the Commission's judgment about the appropriate increase in the level of PPS payment rates. It is equal to the forecasted change in the market basket index minus 1.8 percentage points, 0.2 percentage points higher than mandated in current law. Since it is based on the most recent projections of the fiscal year 1996 increase in the market basket index, the effective value of ProPAC's update factor recommendation may be modified as more timely forecasts become available. The components of ProPAC's update factor recommendation are summarized in Table 2-1, and a discussion of each follows.

It should be noted that the growth in average per case payments in each year is higher than the PPS update. This is primarily because increases in the Medicare case-mix index (CMI) result in proportional increases in hospital payments. Future changes in the CMI are difficult to predict; however, on the basis of currently available data, ProPAC estimates that the CMI will rise by 1.0 percent in fiscal year 1996. Based on the Commission's recommendation of a 2.1 percent update, the average increase in per case payments would be about 3.1 percent.

PPS Market Basket Forecast and Forecast Error Correction—The forecasted increase in the market basket index is the expected change in the prices of the resources used during a typical hospital stay. This forecast is the reference point used in updating the PPS payment rates. The current forecast is for a 3.9 percent increase in the Health Care Financing Administration's (HCFA) PPS market basket index during fiscal year 1996.

In its March 1990 *Report and Recommendations to the Secretary, U.S. Department of Health and Human Services*, ProPAC proposed modifications to HCFA's market basket. Although the agency adopted most of these modifications, it did not incorporate the key provision, which would have increased the weight of internal hospital wages in the computation of the market basket index. The

Table 2-1. Recommended Update Factor for PPS Hospital Operating Payments, Fiscal Year 1996

Components of the Update		
Fiscal year 1996 HCFA PPS market basket forecast*		3.9%
Adjustment for difference between HCFA and ProPAC market baskets*		0.0
Correction for fiscal year 1994 forecast error		-1.8
Allowance for scientific and technological advances		0.3
Adjustment for productivity		-0.3
Adjustments for case-mix change (fiscal year 1995)		
Total DRG case-mix index change	-1.0	
Real across-DRG case-mix change	0.8	
Within-DRG case-complexity change	0.2	
Net adjustment for case-mix change		0.0
Total PPS operating update		2.1

* Market basket forecast provided by the Health Care Financing Administration, Office of the Actuary, December 1994. The market basket forecast is subject to change as more current data become available.

market basket as currently constructed does not adequately recognize the unique characteristics of the hospital labor market. ProPAC encourages the Secretary to consider adopting the Commission's formulation of the market basket when the index is rebased later this year.

Since the PPS update for fiscal year 1996 is legislated relative to HCFA's market basket, that market basket is used as the basis for ProPAC's update framework. The Commission takes this into account by making an adjustment to allow for the estimated effect of the modifications it has proposed. However, the current fiscal year 1996 forecast is that the increase in ProPAC's and HCFA's market baskets will be the same. The corresponding adjustment, therefore, is zero percentage points.

A correction for substantial error in market basket forecasts is an important part of the Commission's update framework. This correction protects both hospitals and the Federal government by adjusting the base payment rates so that the effects of past forecast errors (both positive and negative) are removed.

A forecasted market basket increase of 4.3 percent was used to set payments in fiscal year 1994. The actual market basket increase, however, was only 2.5 percent. The update for fiscal year 1994 thus was set 1.8 percentage points higher than if the actual market basket increase had been known at the time. Therefore, ProPAC's update recommendation also includes a –1.8 percentage point adjustment for fiscal year 1994 market basket forecast error. (See Appendix A for more information on the components of the market basket forecast error.)

Scientific and Technological Advances—The allowance for scientific and technological advances is a future-oriented policy target. It provides additional funds for hospitals to adopt quality-enhancing, cost-increasing health care advances. This year, ProPAC is using a qualitative approach to develop its estimate for the fiscal year 1996 adjustment by examining technologies considered in last year's estimate and reviewing the literature for potential new advances. (See Appendix A for more information on the methodology and the technologies contributing to the estimate.) In the Commission's view, 0.3 percent is an appropriate level for the operating S&TA allowance for fiscal year 1996. This is the same estimate used in setting the fiscal year 1995 allowance. There is no compelling reason to believe the rate of increase in these costs has either risen or fallen substantially from last year's estimate.

Productivity Improvement—The productivity adjustment is also a future-oriented policy target. The Commission thinks it is reasonable to expect hospitals to achieve productivity improvements during fiscal year 1996 that are comparable to those expected in other sectors of the service economy. The recommended adjustment of −0.3 percentage points is based on ProPAC's determination that hospital productivity should increase by 0.6 percent and that the savings from such productivity improvement should be shared equally by hospitals and the Medicare program. Furthermore, the Commission expects hospitals to be able to finance scientific and technological advances through such gains in fiscal year 1996. This provides an incentive for hospitals to strive for productivity gains as they adopt new technologies. (See Appendix A for more information on trends in hospital productivity.)

Case-Mix Change—The Commission's fiscal year 1996 PPS update recommendation also accounts for the net effect of case-mix change during fiscal year 1995. The adjustment in this year's update is zero percentage points and reflects the following:

- A 1.0 percentage point reduction for the estimated change in the CMI,
- A positive allowance of 0.8 percentage points for real case-mix change across diagnosis-related groups (DRG), and
- A positive allowance of 0.2 percentage points for within-DRG case-complexity change.

Adjusting for these factors allows payments to increase due to real changes in the resources required to treat an average Medicare patient. Medical record documentation and coding practice improvements do not reflect increased patient resource requirements, so their impact on the CMI is also removed. (See Appendix A for more detailed discussion on case-mix change.)

Recommendation 2: Update Factor for Capital Payments to PPS Hospitals

For fiscal year 1996, the Commission recommends using a formula-based approach to update capital payment rates that includes the following:

- **The projected increase in a market basket index that measures the purchase price of capital used by hospitals, currently estimated at 4.1 percent;**
- **An adjustment to correct for substantial error in the capital market basket forecast (not applicable in fiscal year 1996);**
- **An adjustment of zero percentage points to reflect changes in financing costs;**
- **A net adjustment of zero percentage points for scientific and technological advances and productivity; and**
- **A net adjustment of zero percentage points for case-mix change in fiscal year 1995.**

This would result in an update factor of 4.1 percent.

The capital update formula is designed to maintain adequate hospital capital stock to provide efficient and effective care to Medicare beneficiaries. In the Commission's opinion, the capital update should reflect future replacement prices. The components of the update recommendation, summarized in Table 2-2, are discussed below. (See Appendix A for more information on the capital update.)

Capital Market Basket—ProPAC determines the capital update recommendation in light of projected increases in a market basket index that measures changes in the prices of capital assets that hospitals purchase. Developed by the Commission, the index measures annual change in the price of a fixed mix of capital goods. It is analogous to the one used to update PPS operating payments. (See Recommendation 1.)

The capital market basket includes three price components: buildings and fixed equipment, movable equipment, and other capital-related costs like insurance. The market basket weights indicate the relative importance of these three components. These weights are based on the shares of capital costs accounted for by buildings and fixed equipment and by movable equipment depreciation, as well as by annual outlays for other capital-related costs. In the absence of accurate and current infor-

Table 2-2. Recommended Update Factor for PPS Hospital Capital Payments, Fiscal Year 1996

Components of the Update	
Fiscal year 1996 capital market basket forecast[a]	4.1%
Correction for fiscal year 1994 forecast error	b
Financing policy adjustment	0.0
Allowance for scientific and technological advances	c
Adjustment for productivity	c
Net adjustment for case-mix change[d]	0.0
Total capital update	4.1

[a] Market basket developed by ProPAC; forecast supplied by the Health Care Financing Administration, Office of the Actuary, December 1994. The market basket forecast is subject to change as more current data become available.

[b] Not applicable.

[c] Adjustments for scientific and technological advances and productivity offset each other. No specific values were recommended.

[d] Case-mix change adjustments are identical to those used in the PPS hospital operating update.

mation on the mix of appropriate future capital purchases, these historical shares are the best available measures for this purpose.

The market basket gives a single-year projection of price change. ProPAC studied a range of alternative capital price measures to use in its market basket. In its March 1993 *Report and Recommendations to the Congress*, the Commission proposed using two price proxies especially relevant to hospital industry capital purchases: for hospital buildings and fixed equipment capital costs, the Boeckh building cost index subindex for apartments and office buildings (institutional construction); and for movable equipment capital costs, the Marshall and Swift hospital equipment index. For other capital-related costs, the market basket uses the consumer price index for residential rent.

Although updates should apply to the full Medicare capital payment rate, which is based on historical levels of depreciation and interest, changes in interest rates should be handled separately from the market basket. The Commission's financing policy adjustment addresses the issue of interest rate change in the update framework.

The capital market basket proposed by the Secretary uses a complex structure of weighted average changes in economywide price proxies and measures of interest expense. Its value is largely determined by the historical values of its components. As a result, this market basket can produce low updates even when current capital prices are increasing significantly. In the Commission's view, a straightforward market basket based on the projected changes in the price of appropriate hospital capital purchases and in other capital-related costs in the coming fiscal year is preferable. ProPAC's market basket would provide Medicare capital payments consistent with anticipated capital purchase prices.

As of January 1995, the projected increase in ProPAC's market basket index for fiscal year 1996 is 4.1 percent. This forecast may change as more recent data become available and as methodologies for estimating the market basket's components are refined.

Forecast Error Correction—The Commission believes past market basket index forecast errors should be corrected within the update framework. This correction protects both hospitals and the Federal government by adjusting the payment rates so that the effects of past forecast errors are not perpetuated. Because fiscal year 1996 is the first year in which a capital update framework will be used, there is no correction to make this year.

Financing Policy Adjustment—The Commission's update framework includes a financing policy adjustment to account for substantial changes in long-term interest rates. This adjustment would be used when current interest rates differ markedly from the recent past and the difference is expected to persist or grow. Short-term fluctuations in interest rates should not affect the market basket. Inclusion of interest in the market basket could lead to volatility in updates, overcompensation of hospitals in some circumstances, and undue risk for facilities at other times.

Changes in interest rates can create significant financial burdens or substantial financial windfalls for hospitals. Extended periods of unusually high rates could force hospitals to choose between postponing needed renovation projects or incurring indebtedness beyond what Medicare payments would support. The financing policy adjustment would increase the capital update in such circumstances to ensure that facilities could maintain capacity adequate for cost-effective care for Medicare beneficiaries. It could raise payment updates at times of prolonged high interest rates, when some hospitals might face disruptive financial impacts. When interest rates decline, the adjustment could lower payment updates to allow the Medicare program to share in some of the hospital cost savings.

Although both short-term and long-term interest rates increased markedly in the past year, the Commission anticipates that these changes will have little impact on hospitals' long-term capital financing costs. Therefore, it is not appropriate to adjust capital payments for forecasted changes in interest rates at this time.

Scientific and Technological Advances—ProPAC recognizes that future hospital capital investments may include more costly, quality-enhancing medical technology. The capital update framework adjusts payments to allow for scientific and technological advances. (See Appendix A for more information on this adjustment.) The Commission believes that, in the coming year, hospitals should offset annual capital costs of new technologies by using newly purchased and existing capital more efficiently. Therefore, it does not specify any adjustment for the capital component of scientific and technological advances.

Productivity Improvement—Through its productivity adjustment, ProPAC recognizes that hospitals need to maintain their technological position as well as to adapt their capital stock to a health care environment in which there is less demand for inpatient services. This adjustment is a policy target for improving productivity by using existing plant and equipment more efficiently and by buying cost-decreasing technologies. In the coming year, savings from these sources should be used to offset the costs of scientific and technological advances.

Case-Mix Change—Medicare uses the same DRG definitions and relative weights for operating and capital payments. As a result, capital payments respond to changes in the case-mix index in the same way as do PPS operating payments. Thus, the zero percentage point adjustment to operating payment rates for CMI change is applied to capital payment rates as well. (See Recommendation 1.)

Recommendation 3: Single Operating and Capital Update Factor

> **The Commission recommends that when the transition to fully prospective capital payments is complete, a single update factor should be used for adjusting PPS operating and capital payment rates. Based on ProPAC's recommended updates to the operating and capital payment rates, the total increase to a fully prospective combined payment rate would be 2.3 percent for fiscal year 1996.**

The Commission believes there ultimately should be one payment for hospital inpatient operating and capital expenses, with a single annual update to that payment. Despite separate payment methods, hospitals do not distinguish between their operating and capital payments. Operating payments may be used to defray capital shortfalls and vice versa. Thus, separate update factors for operating and capital expenses do not reflect the way hospitals actually use their revenues or make investment decisions.

ProPAC therefore recommends the development of an update framework that includes capital and operating components for use as soon as practicable. Like the operating update ProPAC uses, the combined update approach should incorporate operating and capital market baskets to measure changes in prices, as well as adjustments for scientific and technological advances, productivity, and case-mix change. This would ensure that updates to both operating and capital base payment rates reflect increases in the cost of the goods and services that hospitals require to produce inpatient hospital care efficiently. Ultimately, operating and capital components should be included in a single market basket and set of adjustments.

Table 2-3. Estimated Fiscal Year 1996 Average Increase in Per Case Payments Under Fully Prospective Rates

Operating update factor	2.1%
Capital update factor	4.1
Total average update	2.3
Estimated case-mix index change (fiscal year 1996)	1.0
Total average increase in PPS payments*	3.3

* The total average increase in PPS payments reflects the multiplicative effects of the total average update and case-mix index change.

A combined fully prospective update would yield an increase of 2.3 percent under the Commission's recommendation. The total increase to payments, however, would be about 3.3 percent due to expected increases in the case-mix index (see Table 2-3).

Recommendation 4: Update Factor for Hospitals Paid on the Basis of Hospital-Specific Rates

> **For fiscal year 1996, payments based on hospital-specific base-year costs for sole community hospitals should be updated by the same factor as the rate for all other PPS hospitals. Furthermore, it is no longer necessary to calculate a separate update for these hospitals.**

This recommendation would result in a 2.1 percent update to the hospital-specific rates for fiscal year 1996, consistent with the Commission's recommendation for the PPS update. Since the update is based on current projections of the fiscal year 1996 increase in the market basket index, its effective value may be modified as more current forecasts become available.

Following OBRA 1989, certain hospitals have been paid the higher of three amounts: the PPS rate, their own 1982 base-year costs updated to the current year, or their updated 1987 base-year costs. Sole community hospitals, which meet criteria related to distance from other hospitals or market share, qualify for this special treatment. Small rural Medicare-dependent hospitals—rural hospitals with fewer than 100 beds and at least a 60 percent Medicare share of total discharges or inpatient days—were also paid on the basis of hospital-specific rates through fiscal year 1994. These Medicare-dependent hospitals are now paid on the basis of the PPS rate.

Current law requires that the hospital-specific rates for sole community hospitals be updated at a rate equal to market basket minus 2.0 percentage points in fiscal year 1996, the same as for other PPS hospitals. ProPAC believes the update for these hospitals should be no different from that applied to all other PPS hospitals. Although these hospitals are accorded special treatment under PPS because they may face higher historical costs due to their special circumstances, they should be able to control their cost increases as other hospitals do. The factors considered in the Commission's update framework for PPS hospitals therefore are appropriate for these hospitals as well.

Recent data show that sole community hospitals have higher PPS and total margins than most other hospital groups. The Commission will continue to monitor the financial condition of sole community hospitals for signs of potential stress, but will no longer provide a separate recommendation unless conditions warrant it.

Recommendation 5: Update Factor for PPS-Excluded Hospitals and Distinct-Part Units

> **For fiscal year 1996, the target amounts for PPS-excluded hospitals and distinct-part units should be updated to account for the following:**
>
> - **The projected increase in the HCFA PPS-excluded hospital market basket index, currently estimated at 3.9 percent;**
> - **An adjustment of zero percentage points to reflect the difference between the ProPAC and HCFA market baskets;**
> - **A negative adjustment of 1.6 percentage points to correct for substantial error in the fiscal year 1994 market basket forecast; and**
> - **An adjustment of zero percentage points for scientific and technological advances.**
>
> **This would result in an update factor of 2.3 percent.**

When PPS was established, prospective payment based on DRGs could not be applied universally, so certain providers were excluded. Five types of specialty hospitals (psychiatric, rehabilitation, long-term, children's, and cancer) and two types of distinct-part units in general hospitals (psychiatric and rehabilitation) are now exempt from PPS. These providers are excluded primarily because DRGs fail to predict their resource costs accurately.

PPS-excluded hospitals and distinct-part units are subject to the payment limitations and incentives established in the Tax Equity and Fiscal

Responsibility Act of 1982 (TEFRA). Each provider is paid on the basis of its current Medicare-allowable inpatient operating costs per discharge or a target amount. The target amount is based on the provider's allowable costs per discharge in a base year, trended to the current year by an annual update factor. Medicare's share of allowable capital costs is paid in its entirety.

Under TEFRA, a facility with Medicare-allowable inpatient operating costs that are less than its ceiling (its target amount times the number of discharges) receives its costs plus either 50 percent of the difference between its costs and its ceiling or 5 percent of the ceiling, whichever is less. A facility with inpatient operating costs above its ceiling receives the ceiling plus 50 percent of the difference between the ceiling and its costs. Total payments, however, may not exceed 110 percent of the ceiling. Further, TEFRA provides an exceptions process whereby facilities may receive payment adjustments.

Although the Congress legislates the update to the TEFRA target amounts, the Secretary and ProPAC are required to recommend an annual update factor. Through fiscal year 1997, each facility is to receive an update ranging from the projected increase in the market basket index to the market basket increase minus 1.0 percentage points. The Commission recommends an average update to the target amount equal to the market basket minus 1.6 percentage points for fiscal year 1996 (see Table 2-4).

Market Basket—The update recommendation is determined primarily by the projected increase in the PPS-excluded market basket index. The market basket measures the price of inputs used by these facilities in treating Medicare patients. The current HCFA market basket increase forecast for fiscal year 1996 is 3.9 percent. There is no difference between the HCFA and ProPAC market basket forecasts for 1996, so no adjustment to reflect this difference is necessary.

Forecast Error Correction—ProPAC believes the update should be corrected for substantial past market basket forecast errors. Because projections must rely on available data, they cannot accurately anticipate all future economic conditions that may affect input prices. Updates based on market basket forecasts, therefore, may result in overpayments or underpayments to PPS-excluded facilities, which should not be carried forward to subsequent payment years. The market basket projection used to update TEFRA target amounts in fiscal year 1994 was 4.3 percent. The actual market basket increase, however, was only 2.7 percent. Therefore, the Commission's update recommendation includes a negative adjustment of 1.6 percentage points for fiscal year 1994 market basket forecast error.

Scientific and Technological Advances—ProPAC also believes the update should include an allowance for scientific and technological advances for PPS-excluded hospitals and distinct-part units. This allowance is intended to encourage providers to adopt quality-enhancing technologies, even when they increase costs. It reflects the Commission's judgment about the expected growth in the cost of scientific and technological advances used to provide inpatient services to Medicare beneficiaries.

To reach an informed judgment on the appropriate allowance, ProPAC reviewed prior

Table 2-4. Recommended Update Factor for PPS-Excluded Hospitals, Fiscal Year 1996

Components of the Update	
Fiscal year 1996 HCFA PPS-excluded market basket forecast*	3.9%
Adjustment for difference between HCFA and ProPAC market baskets*	0.0
Correction for fiscal year 1994 forecast error	-1.6
Allowance for scientific and technological advances	0.0
Total update	2.3

* Market basket forecast provided by the Health Care Financing Administration, Office of the Actuary, December 1994. The market basket forecast is subject to change as more current data become available.

allowances and made a general assessment of the change in the use and cost of technologies expected for fiscal year 1996. On the basis of this review, the Commission concluded that the diffusion of new technologies will not substantially increase Medicare costs in PPS-excluded facilities in fiscal year 1996. Therefore, it recommends no allowance for scientific and technological advances.

Unlike the update for PPS hospitals, the update for excluded facilities does not include a productivity adjustment. The productivity adjustment to the PPS update is based on the principle that Medicare should share in the savings generated by productivity improvements. However, Medicare automatically shares in the savings under TEFRA because part of any productivity increase is factored into reduced Medicare payments. A further reduction in payments for gains in productivity therefore would not be appropriate.

Revising the Payment Method—OBRA 1990 required the Secretary of Health and Human Services to propose revisions to the current payment system for PPS-excluded hospitals and distinct-part units. It also required ProPAC to comment on the Secretary's proposal. The Secretary's report has not been released. The Commission, however, submitted to the Congress in October 1992 an interim report on payment reform for PPS-excluded providers.

ProPAC's report findings suggested that, in aggregate, TEFRA payments to PPS-excluded facilities appeared adequate for most provider types. Notable exceptions were psychiatric hospitals and distinct-part units, and long-term hospitals. However, substantial variation in the proportion of facilities with costs exceeding their target amount was found across and within all provider types. Further, the Commission could not make definitive conclusions regarding the adequacy of the TEFRA payment system due to the lack of information on the amount of exceptions payments made to PPS-excluded providers. More recent data are consistent with these conclusions.

Specialty hospitals and distinct-part units were excluded from PPS primarily because the DRG patient classification system does not adequately group patients in these facilities according to resource use. However, considerable effort has been put into developing a patient classification system for rehabilitation hospitals and distinct-part units that is based on patient functional status. The Commission supports such efforts to develop prospective payment systems for specialty providers.

Although at this time prospective payment for these facilities is not feasible, modifications to the TEFRA payment method may be possible. Each type of PPS-excluded provider has unique patient characteristics and cost experiences, yet all receive the same basic update to the target amount. Further, TEFRA does not account for changes in case mix and relative wage rates. A more complete understanding of the cost characteristics of these facilities would help to identify appropriate revisions to the current payment system and update formula.

ProPAC encourages the Secretary to examine further the factors contributing to cost increases among these facilities. The Commission will continue to evaluate the appropriateness of the TEFRA system for PPS-excluded providers, and will respond to the Secretary's proposal for payment reform when it becomes available.

Recommendation 6: Update to the Composite Rate for Dialysis Services

For fiscal year 1996, the composite rate for dialysis services should be updated to account for the following:

- **The projected increase in the market basket index for dialysis services, currently estimated at 3.7 percent;**
- **A net adjustment of zero percentage points for scientific and technological advances and productivity; and**
- **A negative discretionary adjustment of 3.7 percentage points to reflect the relationship between payments and estimated fiscal year 1995 costs.**

This would result in an update of zero percent.

In 1972, the Congress extended Medicare coverage to almost all U.S. residents with end-stage renal disease. These beneficiaries are entitled to all Medicare-covered services, including dialysis treatments or transplant services to replace lost kidney function. Since 1983, facilities that provide outpatient dialysis services have been paid a composite rate for each dialysis session. This rate is a prospective payment intended to cover the costs of services typically furnished during a dialysis treatment (related physician services are paid separately). Derived from data from 1977 through 1979, it represents a weighted average cost per treatment for dialysis provided in facilities and at home, according to the proportion of beneficiaries treated in each site. This method was intended to promote the less expensive home treatment alternative by paying the same amount for care provided in either site. The level of the composite rate has remained essentially unchanged since it was developed.

OBRA 1990 requires ProPAC to recommend an annual update to dialysis payments. In developing its recommendation for fiscal year 1996, the Commission first estimated how much costs would increase between fiscal years 1995 and 1996 using a framework similar to that used in the update recommendation for PPS hospitals. Then it evaluated the adequacy of the base payment rates to which the update factor would be applied. (See Appendix A for more information on the background analyses.)

Market Basket—The market basket index is intended to measure changes in the price of inputs dialysis facilities use to produce dialysis treatments. It reflects all the goods and services dialysis providers purchase. Using 1993 dialysis facility cost report data, four types of inputs were identified: capital, labor, other direct inputs, and overhead. Each component has a weight that represents its cost share, or proportion of total expenses. The price change for each component is measured by a proxy. The price proxies were adapted from those Medicare uses for the PPS, home health agency, and skilled nursing facility market baskets. The Commission's analysis indicates that the prices of inputs used in a dialysis treatment will rise by about 3.7 percent between fiscal years 1995 and 1996.

Scientific and Technological Advances—The scientific and technological advances allowance is intended to encourage dialysis facilities to adopt new technologies that improve the quality of patient care, even when they increase costs. It is an estimate of the expected increase in operating and capital costs that will result from the diffusion of new and emerging dialysis-related technologies during the coming fiscal year. To reach an informed judgment on the appropriate allowance, ProPAC examined the most important new cost-increasing innovations in the dialysis industry. On the basis of this analysis, the Commission estimates that facility costs will rise by 0.6 percent due to the adoption of new technologies in fiscal year 1996.

Productivity Improvement—The productivity adjustment is intended to provide dialysis facilities with a financial incentive for continued improvement in productivity through the more efficient use of resources. It is an estimate of the productivity gains that can be expected for the coming year. Historical data indicate that substantial productivity improvements in this industry have resulted in significant cost reductions. After considering a range of options, however, the Commission concluded that productivity gains of comparable magnitude are not likely for fiscal year 1996. Nevertheless, facilities can achieve modest productivity gains that will offset the costs of scientific and technological advances.

Discretionary Adjustment—ProPAC's update framework suggests that dialysis costs will increase by 3.7 percent in fiscal year 1996. An analysis of Medicare payments, however, indicates that, in aggregate, composite rate payments are essentially equal to estimated Medicare costs for fiscal year 1995. Moreover, Medicare payments to independent dialysis facilities—which make up the majority of facilities and provide the majority of treatments—are about 13 percent higher than Medicare-allowable costs. Therefore, most facilities are likely to have substantial Medicare profits in fiscal year 1996, despite rising costs. Accordingly, the Commission applied an off-setting adjustment to the update framework and recommends no increase to the composite rate at this time.

The Commission considered a separate update for hospital-based dialysis facilities. It is concerned about these providers' low ratio of payments to costs, which is estimated to be 0.76 in fiscal year 1995. This ratio has declined over time.

On average, the cost per treatment in hospital-based facilities is about 50 percent higher than in independent facilities. Medicare recognizes this difference by paying hospital-based facilities $4 more per treatment. Medicare also provides for exceptions payments to facilities with justifiably higher costs. ProPAC analyses have been unable to explain hospital-based facilities' higher costs. Additional studies have not demonstrated differences in case severity, quality of care, or patient outcomes between hospital-based and independent facilities. Therefore, the Commission has no basis for recommending a differential update.

ProPAC also is concerned about future increases in the cost of providing dialysis services. In response to widespread concern within the industry regarding the adequacy of dialysis, HCFA is considering revisions to Medicare's conditions of participation to require facilities to document that treatments comply with adequacy standards. Many industry experts agree that to achieve these standards, facility costs will necessarily rise. The Commission believes that payments must recognize such costs.

ProPAC will continue to evaluate composite rate payments to dialysis facilities. Its analysis will focus on the difference between payments and costs, and how this relationship varies across providers and over time. Additionally, the Commission will analyze information regarding the relationship between facility costs, quality of care, and patient outcomes.

Improving PPS Payment Policies

The prospective payment system adjusts hospital payments in several ways to account for factors such as the level of teaching activity, wage rates, and patient complexity, which may legitimately affect hospital costs. These adjustments are important for providing fair payments to hospitals that reflect the circumstances they face.

As part of its mandate, the Commission examines the distribution of PPS payments across hospitals and makes recommendations concerning various adjustments to the payment system. ProPAC considers adjustments that are made both at a hospital level and at a case level. In this year's report, the Commission recommends improvements in the indirect medical education (IME) adjustment, outlier payment policy, the accuracy of DRG payment rates and coding change adjustments, and transfer payment policy.

Recommendation 7: Level of the Indirect Medical Education Adjustment to PPS Operating Payments

> **For fiscal year 1996, the indirect medical education adjustment to PPS operating payments should be reduced by 13 percent, from a 7.7 percent to a 6.7 percent increase for every 10 percent increment in teaching intensity. Ultimately, the indirect medical education adjustment should be reduced by about 40 percent, to a 4.5 percent increase for every 10 percent increment in teaching intensity.**

The indirect medical education adjustment is intended to recognize the higher costs teaching hospitals incur in treating Medicare patients. These costs have been attributed to teaching hospitals caring for patients with more severe or complex illnesses, providing a broader scope of services and more services per patient, using a costlier mix of staff, and developing and introducing improvements in diagnostic and therapeutic technologies.

ProPAC annually estimates the relationship between teaching intensity and standardized Medicare operating costs per discharge. The measure of teaching intensity is based on the ratio of residents to beds. The standardization controls for differences in costs that are accounted for by other PPS payment factors. These include the local area wage index, the hospital's Medicare case-mix index, and outlier payments for extremely long or costly cases. ProPAC's analysis also controls for differences in costs associated with location in large urban, other urban, and rural areas. The most recent analysis was based on cost data from the ninth year of PPS and payment rules for fiscal year 1995. The results indicate that, on average, each 10 percent rise in teaching intensity is associated with a 4.5 percent increase in Medicare operating costs per discharge.

The estimated relationship between costs and teaching intensity is affected by changes in other PPS payment factors that account for differences in costs. For example, implementation of improvements in the accuracy of DRG rates and outlier payment policy would alter the distribution of Medicare payments between teaching and non-teaching hospitals. (See Recommendations 8 and 9.) Modification of these components would influence the estimate of the relationship between costs and teaching intensity used by the Commission as the basis for its recommendation on the appropriate level of the IME adjustment.

The Commission recognizes that since PPS began, the Medicare program has more than adequately compensated teaching hospitals for the costs of treating Medicare patients. The current IME operating payment adjustment increases Medicare payments to teaching hospitals by about 7.7 percent for every 10 percent increment in teaching intensity. This is substantially above the 4.5 percent increase suggested by ProPAC's analysis. Moreover, PPS operating margins consistently have been higher for teaching than for non-teaching hospitals. This is especially true for major teaching hospitals (those with the highest levels of teaching intensity).

Accelerating price competition in the private sector, however, is reducing the ability of teaching hospitals to obtain the higher patient care rates from other payers that traditionally have contributed to financing the costs associated with graduate medical education. The Commission believes the purpose of the IME adjustment is to support the distinct role that teaching hospitals currently play in the provision of health care. It is concerned that a substantial and immediate reduction in Federal support might impair their ability to fulfill this role. In ProPAC's view, Medicare's responsibility to its enrollees extends beyond merely paying for beneficiaries' services to maintaining access to the quality and types of care provided at teaching hospitals. This might be affected adversely by a sharp decline in IME payments.

Given these considerations, a phased reduction of the IME adjustment is a prudent course of action. ProPAC's recommendation would reduce the adjustment by about one-third of the difference between the current 7.7 percent level and the 4.5 percent empirical estimate. Subsequent phases of the reduction should be implemented only after evaluation of the effect on access to quality care for Medicare enrollees. In addition, the distribution of IME payments across hospitals should be examined further, recognizing as an ultimate objective the use of the IME adjustment to compensate appropriately for differences in Medicare patient care costs that are attributable to medical education.

Previous Commission recommendations to reduce the IME adjustment have included provisions for budget-neutral redistribution of the savings, generally through corresponding increases in the standardized amounts. In the seven years since the IME adjustment was last changed, however, other components of the prospective payment system have been modified. Policy and technical changes have shifted the distribution of payments among hospital types. The distribution of PPS payments no longer resembles the original base-year costs on which the system was based. Therefore, ProPAC is not recommending that the anticipated decrease in IME payments be returned to all hospitals through a proportionate increase in the standardized payment amounts.

Changes in the IME adjustment should be considered in the context of its interactions with other payment system components and its effects on PPS payments, as well as hospitals' overall financial status. The impact on quality and access to care should also be considered. In the coming year, ProPAC will continue to examine the level and structure of the IME adjustment and other factors that affect hospitals' payments, costs, and financial condition. The distribution of PPS and total margins and the other effects of potential changes in the IME adjustment will be studied. For more information on ProPAC's most recent analyses, see the technical report, *The Indirect Medical Education Adjustment to PPS Payments* (forthcoming).

Recommendation 8: Improving Outlier Payment Policy

> **The Medicare statute should be amended so that the estimated cost of a case for determining outlier payment and the outlier payment amount are not adjusted to reflect a hospital's teaching and disproportionate share status. This change would make the outlier payment policy more effective in protecting hospitals from the risk of large losses on some cases.**

Under PPS, a hospital receives a fixed payment rate per discharge for each type of patient. The diagnosis-related groups used to classify patients and establish these rates are designed to group cases with similar expected resource requirements. The hospital then faces the risk that its costs for a case may differ from the DRG payment rate it receives.

Most hospitals should be able to offset losses from more costly cases with gains from less costly ones. Because the cost of treatment may vary widely among the cases in any DRG, however, even efficient hospitals may have some cases for which costs are much higher than the DRG payment rate. These cases represent large financial losses for the hospitals that treat them.

To reduce financial risk and incentives to avoid treating such patients, hospitals are eligible to receive additional payments for cases with unusually long stays (day outliers) or unusually high costs (cost outliers). OBRA 1993 substantially changed PPS payment policies for these cases. Beginning in fiscal year 1995, additional payments for day outliers are being phased out over four years. Also beginning this year, a case qualifies for additional payments as a cost outlier if the hospital's estimated cost for the case exceeds a fixed loss threshold.

A hospital's loss threshold for a DRG is determined by adjusting a national fixed loss amount ($20,500 for fiscal year 1995) by the hospital's wage index and cost of living adjustment (COLA), and adding this amount to the hospital's base payment rate for the DRG. For a case with estimated costs above the threshold, the hospital receives an additional payment equal to 80 percent of the difference.

With fixed loss thresholds, the amount of loss a hospital must incur before receiving additional payments is the same for all DRGs. Although DRG-specific loss thresholds differ among hospitals according to their wage index and COLA values, the real (input price adjusted) amount of loss is constant. This is consistent with the concept that a dollar of real loss is equally important, regardless of the DRG or hospital in which it occurs.

The amount of loss a hospital incurs, however, also depends on how the costs of a case are measured. Currently, these costs are estimated by adjusting the hospital's billed charges for Medicare-covered services by its overall average cost to charge ratio. Then, the estimated costs are standardized (reduced) to reflect the hospital's indirect medical education and disproportionate share (DSH) payment adjustments.

Under this policy, a case in a teaching or disproportionate share hospital is considered to be less costly than one with equal adjusted charges in a non-teaching, non-disproportionate share hospital. Therefore, similar cases treated in a teaching or disproportionate share hospital are less likely to qualify for cost outlier payments. And when they do, the outlier payment is smaller. Although outlier payments are then increased by each hospital's IME and DSH adjustments, this does not make up for the reduced outlier payments these hospitals receive.

This policy leads to payment inequities among hospitals. In addition, the outlier payment policy is less effective than it could be in limiting the financial risk associated with extraordinarily costly cases. Therefore, the Commission believes the estimated cost of a case and the outlier payment should not be adjusted to reflect a hospital's IME and DSH status.

In its March 1994 *Report and Recommendations to the Congress*, ProPAC recommended implementing this change for fiscal year 1995. In her response to the Commission's recommendations, the Secretary agreed with this proposal. She indicated that she has authority to eliminate the IME and DSH adjustments now applied to reduce the estimated cost of a case. However, current law requires her to apply these adjustments to all payments based on the DRGs, including those for outliers. Eliminating the adjustments applied to estimated costs without doing so for outlier payments would merely create opposite payment inequities. Consequently, she was unwilling to act without the ability to implement both changes simultaneously.

To resolve this problem, ProPAC recommends amending the Medicare statute to apply the IME and DSH adjustments only to the base DRG payments hospitals receive for all cases. This would eliminate the current IME and DSH add-ons to outlier payments. If possible, the law should be modified early enough to permit the Secretary to implement this change for fiscal year 1996.

Following this change, the Secretary should discontinue applying the IME and DSH adjustments to reduce estimated costs for outlier cases. This would increase outlier payments for extraordinarily costly cases treated in teaching and disproportionate share hospitals. In addition, it would concentrate outlier payments on the highest-cost cases, thereby increasing the effectiveness of outlier policy in limiting the associated financial risk.

Recommendation 9: Making DRG Payment Rates More Accurate

> **The Secretary should implement, as soon as practicable, the DRG severity refinements developed by the Health Care Financing Administration. At the same time, she should improve the accuracy of basic DRG payment rates and outlier payments by changing the methods used to calculate the DRG relative weights. The weights should be based on the national average of hospital-specific relative values for all cases in each DRG, rather than the national average standardized charge per case.**

Under PPS, a hospital receives a base DRG payment rate for each case. It also may receive outlier payments for a case with an unusually long stay or extremely high costs.

The base payment rate for each DRG is determined by multiplying the hospital's base payment amount, which is the same for all cases, by the relative weight for the DRG. The DRG definitions used to classify cases and calculate the relative weights are intended to group cases that are clinically similar and have comparable expected resource requirements. The relative weight for each DRG is intended to measure the relative costliness of a typical case in that category compared with the average cost of all typical Medicare cases.

The methods used to create the key components of this system lead to inaccurate payment rates for individual cases and payment inequities among hospitals. The DRG definitions do not completely account for the effect of variations in severity of illness on hospitals' treatment costs. In addition, the method of calculating the DRG weights leads to systematic errors in the DRG payment rates. Finally, financing outlier payments by a uniform offset to the standardized amounts also may distort the payment rates.

ProPAC believes these problems could be substantially alleviated if DRG refinements and improvements in calculating the weights were adopted, as outlined below. The Commission also has considered changes in the financing of outlier payments. However, it has yet to find a solution that makes the payment rates more accurate for typical cases and preserves broad-based outlier financing across hospitals. ProPAC will continue to examine this issue in the coming year.

DRG Refinement—Currently, all cases are classified in one of 490 DRGs. In many instances, the DRG definitions fail to distinguish significant subgroups of patients that have distinctly different treatment costs. These differences are often related to the presence or absence of specific secondary diagnoses that usually affect the cost of care substantially.

HCFA recently developed major refinements to the DRG definitions that are designed to account for the impact of these secondary diagnoses on costs. The refined DRGs appear to be better able than the current ones to distinguish among cases with different expected costs. Other things equal, implementing the refined DRGs would increase the spread of the relative weights and the accuracy of the payment rates.

Using the new DRGs, some cases now classified in a single category would be assigned to two or three categories with substantially different weights. For example, cases that involve spinal procedures are assigned to DRG 4; in fiscal year 1994, the relative weight for this category was 2.38. Under the refined DRGs, such cases would be allocated among three categories with weights of 1.49, 2.65, and 5.52, respectively.

In other instances, cases now classified in two DRGs would be assigned to two or three more distinct groups. The major chest trauma DRGs (with and without complicating conditions) had weights of 0.50 and 0.94 in fiscal year 1994. Under HCFA's proposal, these cases would be assigned to three DRGs with weights of 0.53, 0.89, and 1.57, respectively.

In addition, the refined DRGs would more accurately identify outlier cases because the payment rates would provide a better standard of comparison. Consequently, adopting the new DRGs would tend to reduce current discrepancies between payments and costs for individual cases and improve payment equity among hospitals.

This change would tend to increase payments to hospitals that have a high case-mix index (such as major teaching hospitals), and reduce payments to those with a low case-mix index (small urban and rural hospitals). Although these effects would hold in general, the impact would vary substantially within such groups.

Some hospitals that would benefit are already treated relatively favorably under PPS because of other errors in the weights or other payment policies, such as those for teaching and disproportionate share hospitals or outlier cases. Similarly, some that would receive lower payments are currently disadvantaged for the same reasons. Therefore, to make payments more equitable overall, other sources of payment inequities also would need to be addressed.

Hospital-Specific Relative Value Weights— The weights for all DRGs are based on the national average standardized charge per case in each category, using the most recent billing data available. The billed charges for each case in a DRG are standardized to remove differences in costs related to three factors. These include geographic variation in hospital input prices (wage rates and price levels for supplies and other non-labor inputs), differences among hospitals in teaching activity (the IME adjustment), and variation in the extent of service to low-income patients (the DSH adjustment). Then, cases with extremely high or low standardized charges (statistical outliers) are identified and removed. Preliminary weights are created by calculating the national average standardized charge per case for the remaining cases in each DRG, and dividing this average by the overall national average standardized charge per case. Finally, the preliminary weight in each DRG is multiplied by a recalibration factor. This factor, which is the same for all DRGs, is necessary to ensure that annual changes in the DRG definitions and weights do not affect the aggregate amount of payments under PPS.

The weights are intended to measure the relative costliness of treating a typical case in each DRG, compared with the overall average cost of typical Medicare cases. Because they are based on the national average standardized charge per case in each DRG, however, they are subject to distortions that arise from several sources. One of these is systematic differences among hospitals in the mark-up of charges over costs. Overall average cost to charge ratios vary systematically among hospitals according to ownership, size, teaching and disproportionate share status, and location. In addition, the pattern of mark-ups among services varies across hospitals.

If the cases in all DRGs were distributed at random among all hospitals, these differences would not create any systematic distortion in the relative weights. In fact, however, cases in high-weight DRGs are more likely to be treated in institutions with relatively high charges, such as large teaching and disproportionate share hospitals in urban areas. Conversely, cases in low-weight DRGs are more likely to be treated in small urban and rural hospitals that have relatively low charges. Consequently, the average mark-up implicit in the case-level charges varies among the DRGs. This distorts the DRG weights, making them vary more than the actual relative cost of treatment.

A similar problem results from systematic differences in the level of costs among hospitals. The current method of standardizing the charges for each case is intended to remove variation that is attributable to geographic differences in the level of input prices, and hospital-specific differences in teaching activity and service to the poor. However, the payment adjustment factors used for this purpose do not accurately represent cost differences among hospitals. Moreover, these adjustments do not account for systematic differences in the level of costs due to other factors, such as variations in practice patterns and efficiency. Because cases in each DRG are not randomly distributed among hospitals, these differences also may affect the DRG weights.

These problems could be addressed by calculating the weights based on hospital-specific relative values. Under this method, the relative weights could continue to be calculated using hospitals' billed charges for all cases. However, the charges for each case would be divided by the hospital's overall average charge per case, and then adjusted to reflect the same scale of costs across all hospitals. This would create a hospital-specific relative value for each case. Then, the national relative weight in each DRG would be calculated as the case-weighted average of the relative values for all cases in the category.

The hospital-specific relative value method would automatically remove distortions in the weights caused by variation in hospitals' charge mark-ups and costliness. It also would eliminate the need to standardize hospitals' charges. The Commission's analysis indicates that DRG weights based on this method (relative value weights) differ substantially from the current weights. The relative value weights are consistently higher in DRGs with low current weights. Conversely, they are often lower (though less consistently) in DRGs with high current weights. These differences occur because cases in low-weight DRGs are more likely to be treated in small urban and rural hospitals with lower average charges, while cases in high-weight DRGs are more likely to be treated in large urban hospitals with high charges.

Other things equal, using relative value weights would tend to increase payments to small urban and rural hospitals, and reduce payments somewhat for large urban hospitals. These anticipated effects are generally opposite those of adopting the DRG severity refinements. ProPAC believes, however, that both changes would improve payment accuracy for individual cases. Therefore, they should help lessen current disparities between payments and costs for many cases.

Adjusting the Weights to Reflect Outlier Payments in Each DRG—The Commission also has considered potential changes in policy designed to correct errors in the payment rates that arise from inconsistencies between the methods used to calculate the DRG weights and those used to finance outlier payments.

Under current policy, outlier payments are financed by a uniform reduction in the standardized payment amounts (5.1 percent for fiscal year 1995). The uniform outlier financing adjustment reduces all hospitals' basic DRG rates proportionately. Outlier cases and payments, however, are highly concentrated in certain DRGs. (Outlier payments as a proportion of total DRG payments vary from less than 1 percent in many DRGs to more than 20 percent in a few categories.) This affects the relative weights of DRGs that have a high proportion of outlier payments because each weight is based on the national average standardized charge for all cases in the category, including outlier cases with extremely high charges. Consequently, the weights overstate the relative costliness of a typical case in DRGs with a high proportion of outlier payments (high-risk DRGs).

This pattern of bias in the DRG weights combines with the uniform outlier financing adjustment to produce both upward and downward errors in the DRG payment rates. The upward effects on the weights for high-risk DRGs are only partially offset by the 5.1 percent reduction in the standardized amounts. The weights for DRGs with a low proportion of outlier payments (low-risk DRGs), however, have little or no bias. Consequently, the 5.1 percent outlier financing adjustment reduces the payment rates too much for these DRGs. Therefore, the payment rates may be too low in low-risk DRGs, and too high in high-risk DRGs.

Although these errors primarily affect basic DRG payments, they also alter the distribution of outlier payments among hospitals. This occurs because the fixed loss thresholds are set too high in high-risk DRGs (since the basic DRG rates are too high), and too low in low-risk DRGs (where the DRG rates are too low). As a result, outlier payments are smaller than they otherwise would be for cases in high-risk DRGs, and larger than they would be for cases in low-risk DRGs.

To solve this problem, ProPAC investigated the desirability of making DRG-specific offsets to the relative weights to finance outlier payments. Under this approach, each DRG weight would be reduced to reflect the estimated proportion of outlier payments in that category based on the most recent billing data. In addition, the standardized payment amounts would be increased to remove the current outlier financing adjustment. This would change the DRG weights, the fixed loss outlier thresholds, basic DRG payments, and the amounts and proportions of outlier payments by DRG.

The revised DRG weights based on this approach would more accurately reflect the actual relative costliness of treating typical cases in each DRG. Therefore, this policy would tend to reduce existing discrepancies between payments and costs for many individual cases. The Commission is concerned, however, that this approach would impose an unfair burden on hospitals that treat cases in high-risk DRGs, because the full cost of extra payments for outlier cases would be financed through reduced base payment rates in those DRGs.

Current outlier financing policies raise two issues. One is how to account for outlier payments in setting a weight that accurately reflects the relative costliness of treatment for typical cases. The second issue is how to finance outlier payments so that the burden of treating such cases is spread fairly among all hospitals. Although these problems can be separated conceptually, the Commission has not yet found a method that addresses both adequately. In the coming year, ProPAC will continue to explore alternative solutions to these issues.

Recommendation 10: Improving Annual Update Policies

> **The Secretary should be given authority to adjust the standardized amounts if anticipated coding improvements would increase aggregate payments by more than 0.25 percent during the coming year. This adjustment should be separate from the annual update. It should be based on findings from empirical analysis of the new HCFA database of reabstracted medical records. Once sufficient data are available, the Secretary also should make a correction if there is more than a 0.1 percentage point error in a previous adjustment.**

Under current law, the Secretary is required to update the DRG definitions and weights annually to account for changes in practice patterns, medical science, and technology that alter the relative use of hospital inpatient resources among types of patients. In most years, the Secretary has made minor changes in the DRG definitions to address issues raised by the public and the hospital industry regarding the current classification of patients. The Secretary also recalculates the relative weights each year to reflect changes in the relative costliness of each type of case, as indicated by the most recent billing data.

In making these changes, the Secretary is required to hold constant the estimated aggregate payments under PPS for the coming year. This requirement is met through recalibration of the weights, coupled with a budget neutrality adjustment to the standardized payment amounts. The annual recalibration adjusts the new weights so that the national average relative weight using the new DRG definitions and weights is equal to the national average based on the current year's definitions and weights. This removes most of the potential effect of changes in the DRGs and the weights on aggregate payments. A small budget neutrality adjustment is usually necessary to ensure that estimated aggregate payments remain unchanged.

These adjustments are applied to the rates that will be used in making payments to hospitals during the coming year. They are based on billing data that are always two years old. Adjustments for fiscal year 1995, for example, were based on bills for cases discharged during fiscal year 1993.

Actual payments, however, may differ from the earlier estimate for several reasons. The mix of cases among the DRGs may have shifted due to changes in practice patterns or variation in the incidence of illness. Such real changes in case mix are expected to generate corresponding changes in the cost of furnishing treatment. Consequently, the accompanying changes in payment are appropriate.

In addition, hospitals may have improved the accuracy and completeness of the coded clinical information they report on the bills, shifting cases among the DRGs. This kind of case-mix change generally redistributes payments among hospitals and increases total payments. The redistribution of payments is appropriate because the improved case-mix index more accurately reflects the true incidence of treatment costs. However, shifts in case mix caused by changes in reporting would not be expected to increase the aggregate cost of treating Medicare patients, since cases are merely reclassified into different DRGs. Therefore, the accompanying changes in aggregate payments are not appropriate. (See

Appendix A for a discussion of the components of case-mix change.)

Although both ProPAC's and the Secretary's update recommendations exclude the estimated historical change in case mix due to improvements in coding, neither attempts to exclude prospectively the coding change expected in the following year. Thus, under current policy, hospitals get the benefit of any coding improvements during the year in which they occur; estimates of these effects are then removed from the base payment amount in the next annual update. In fact, however, the Congress sets the annual update factor in law. Consequently, it is difficult to know whether the effects of coding changes are fully or partially offset each year.

In recent years, the Secretary has repeatedly raised concerns about the impact of coding changes that might accompany major changes in the DRGs. The severity refinements to the DRGs would create a number of new DRGs with very high weights. A hospital would receive a much larger payment if one of a set of major complications were coded on the bill. Consequently, implementing the refined DRGs could lead to a major change in the relative importance of these secondary diagnoses, and more effort by hospital coders to ensure that they are coded on the bill when they appear in the patient's medical record. This is not inappropriate behavior. But it does raise the problem of how to ensure that hospitals are fairly compensated for changes in costs that result from real changes in the mix of cases, while protecting the Medicare program from increases in payments that result only from better reporting.

To address this problem, the Secretary should be given authority to make an off-setting adjustment to the standardized amounts, separate from the annual update, when substantial improvements in coding are expected during the coming year. This would require a change in current law. In addition, the Congress should modify its legislated annual updates to appropriately account for this change.

An ongoing database of reabstracted medical records also would be needed to estimate the real and coding components of case-mix change, and provide a basis for forecasting future coding changes. Recently, HCFA has developed a monthly random sampling and reabstraction process, under the Peer Review Organization program, that will provide data on about 30,000 records per year. Using such data for the most recent two years, it would be possible to estimate the increase in the case-mix index that would occur if all hospital coders began to code records as accurately and completely as the reabstract coders do. Then, a judgment could be made about how to adjust (reduce) the estimate to reflect the fact that coding accuracy is unlikely to improve by the full amount of the estimate (and certainly not during the course of a single year).

ProPAC believes strongly that adjustments for anticipated coding change should be based only on findings from empirical analysis of the reabstracted data, reduced by judgment as described above. They should not incorporate any assumptions or projections regarding other potential behavioral responses by hospital coders. The Secretary's authority should be limited to occasions in which projected coding changes would increase aggregate payments by more than 0.25 percent.

If the projection were reasonably accurate, the hospital industry would no longer reap the benefit of substantial coding changes. The Medicare program also would avoid large, inappropriate increases in payments. On the other hand, it may be difficult to make accurate forecasts of coding change. Consequently, once sufficient data are available, the Secretary should also make a correction when forecasts diverge from actual experience by more than 0.1 percentage points. This would protect both the program and the hospital industry from the effect of large projection errors.

ProPAC also is concerned about the impact of forecast errors in other adjustments to the PPS payment rates. As part of its annual update recommendation, for example, the Commission makes an adjustment for past forecast errors related to the projected increase in the market basket index. Under current update policies, however, both the Medicare program and hospitals are at risk for discrepancies between the outlier financing offset to the standardized amounts and the actual amount of outlier payments. Despite HCFA's best efforts, outlier payments in recent years have repeatedly fallen well below the 5.1 percent outlier offset. To limit the impact of such errors on the DRG payment rates, ProPAC will include a forecast error correction for this adjustment as part of its recommendation for fiscal year 1997.

Recommendation 11: Improving Medicare Transfer Payment Policy

> **PPS hospitals that treat Medicare patients who are then transferred to another PPS hospital should be paid on the basis of a graduated per diem payment up to the full DRG amount to recognize the higher daily costs associated with the first few days in a patient stay. The Secretary's proposal to pay twice the per diem payment for the first day in a transfer stay would significantly improve Medicare's payment for these cases.**

PPS hospitals that treat Medicare patients who are transferred to another PPS hospital are paid a uniform per diem based on the DRG up to the full payment rate for the case. The final hospital in a transfer sequence receives the full DRG payment for that stay, although the patient involved in the transfer may be assigned to a different DRG for each hospitalization.

ProPAC analysis found that the uniform per diem payment for the transferring hospital undercompensated that hospital for the care furnished during the stay. Payment to cost ratios were substantially below average for cases with short stays, but were closer to average for cases with typical stays. This is because a uniform per diem payment does not recognize the frequently higher costs associated with stabilization, evaluation, and surgery that generally take place early in a patient's hospital stay. In its analysis, HCFA discovered similar problems with transfer payment. The Commission's analysis also found that the receiving hospital was undercompensated for transfer cases because, on average, a larger percentage of these cases become outliers.

In ProPAC's view, the payment system should not influence the decision to transfer a patient. Rather, the decision should be based solely on appropriate patient care. Although there is no evidence that hospitals are avoiding these patients now, Medicare should adequately compensate for transfer cases.

A graduated per diem payment would more accurately reflect the higher daily costs incurred during the first few days of care. HCFA's analysis shows that payment to cost ratios for these cases could be improved significantly if a graduated per diem payment were adopted. A simple doubling of the per diem for the first day of a patient stay in a transfer sequence increased from 0.72 to 0.93 payment to cost ratios for cases paid on the basis of a per diem. Such a graduated per diem payment is necessary, in the Commission's opinion, to improve Medicare payment for these cases and create appropriate incentives for accepting transfers.

ProPAC also continues to be concerned about the impact of outlier payment policy on transfer cases. Compared with other cases, transfer cases received by another hospital are more than twice as likely to become outliers. Further, the losses on these cases tend to be greater than those for outliers who were not transferred. While many of the Commission's outlier payment recommendations have been adopted, the proposal to remove IME and DSH adjustments from case-level costs and outlier payments has not. (See Recommendation 8.) ProPAC analysis has found that, without this change in policy, the other changes recently made in outlier payment policy actually exacerbate the payment inequity for hospitals that receive a large number of transfer cases.

Finally, the Commission is concerned about the continuity of care across treatment settings and the role of Medicare payment policies in fostering service provision in the most appropriate site. ProPAC is pleased that the Secretary has been examining this issue and is looking at alternative payment strategies, such as paying hospitals that transfer patients to non-PPS settings a per diem instead of the full DRG amount. Further study is necessary before such a policy is adopted, however. The Commission would be happy to work with the Secretary in this endeavor.

Strengthening Hospital Outpatient Payment Policies

The past decade has seen unprecedented growth in the delivery of care in hospital outpatient and other ambulatory settings. As the number of services provided in alternative settings increases, so do Medicare payments. ProPAC has been concerned about appropriate payment policies to constrain the volume of ambulatory services. Additionally, the Commission has considered changes to

Medicare's payment for hospital-provided outpatient services to correct problems with excessive beneficiary liability and higher than intended program payments. Recommendations on these two issues follow.

Recommendation 12: Controlling the Volume of Hospital Outpatient and Other Ambulatory Services

> **The Secretary should conduct research on appropriate and effective volume control methods for services provided in hospital outpatient departments and other ambulatory settings. Even with a prospective payment system that relies on Ambulatory Patient Groups or some other service classification scheme, Medicare spending for ambulatory services will continue to grow at a rapid pace because of increased volume. The Secretary should also address how the changing health care delivery system will affect utilization and site of care.**

The Commission supports the Secretary's efforts and congressional intent to establish prospective payment methods for hospital outpatient services under the Medicare program. The Secretary is considering a payment system that would rely on Ambulatory Patient Groups to classify procedures and would assign the same payment rate to similar services. Such a system would create incentives for controlling costs by offering providers the opportunity for a profit as well as the risk of financial loss. The current payment method for hospital-provided outpatient services contributes to both cost and charge inflation. Because payments incorporate at least a portion of facility-specific costs or charges, hospitals that reduce their costs receive less in payments. Thus, there is little financial incentive to deliver care more efficiently.

ProPAC recognizes, however, that a prospective payment rate per unit of service does not control the number of services provided. In the hospital outpatient department, as in all ambulatory settings, increased volume has significantly affected spending growth.

Various methods to control the volume of ambulatory services in the hospital setting, as well as in other sites, should be explored. These include bundling, or grouping services into a package for which a single payment is made; expenditure targets, or setting an acceptable rate of expenditure growth combined with measures to reduce future outlays if the target is exceeded; and capitated methods, or putting providers at financial risk for a defined set of services. The Commission has conducted preliminary analyses of the volume control potential of bundling. Such an approach may limit the increase in ancillary service use, which currently accounts for a small portion of payments associated with outpatient surgeries or radiology procedures. It is unlikely, however, to control the number of surgical and radiological services. Other methods to constrain volume, such as utilization review, case management, and limiting the growth of providers, also should be explored.

In these analyses, the unique characteristics of ambulatory services that contribute to the difficulty in controlling use should be considered. First, most of these services are provided in multiple settings such as hospital outpatient departments, physicians' offices, and free-standing ambulatory clinics. Because Medicare's payment methods differ by site of service, if payment and volume controls are imposed in one setting, utilization probably would shift to another. Second, the broad range of ambulatory services and procedures, combined with the diverse reasons for an ambulatory encounter, complicate the appropriate grouping of services into a payment bundle or under an expenditure target. Third, the difficulty in defining the unit for outpatient payment, along with multiple ambulatory provider types, leaves many opportunities to increase service use and makes it difficult to establish the appropriate payment rate. Finally, data on expected and appropriate ambulatory service use are inadequate; such information would be needed to develop capitated payment rates.

The Secretary should consider the dramatic changes taking place in the organization of health care delivery as volume control methods are being explored. Some private insurers have changed the mix and reduced the use of services through managed care techniques. The Medicare program should explore adopting some of these innovative methods to constrain total program expenditures. New relationships among providers, as evidenced by the increase in integrated delivery networks, are likely to change referral patterns and choice of service site. It is important that Medicare's payment mechanisms account for these changing characteristics of the delivery system.

Recommendation 13: Changes to Medicare's Hospital Outpatient Payment Method

> **Beneficiary coinsurance for hospital-provided outpatient services should be reduced from 20 percent of charges to 20 percent of payments. Further, until prospective payment for hospital outpatient services is implemented, the payment formula should be changed to fully reflect beneficiary coinsurance payments. The savings from correcting the payment formula should be used to offset program expenditure increases caused by reducing beneficiary liability.**

The Medicare beneficiary's share of the payment for hospital-provided outpatient services is significantly more than what the Congress intended. It exceeds 20 percent of the total payment and, therefore, is higher than it would have been had services been provided in another setting. Because payments for these services are not prospective and thus not known until annual cost reports are settled, copayments are calculated as 20 percent of charges, rather than 20 percent of payments. Historically, payments and charges were similar, so the beneficiary's share was not excessive. Over time, however, charges have grown significantly faster than Medicare payments, resulting in an increasing proportion of payments coming from the beneficiary. According to HCFA estimates for 1994, beneficiary copayments for ambulatory surgeries, radiology procedures, and diagnostic services furnished in hospital outpatient settings equaled about 50 percent of payments. This is projected to grow to almost 70 percent by 2000.

The Commission believes the beneficiary share should be reduced immediately. It recognizes this means that copayments would need to be based on an estimate of payments until a prospective system is implemented. This change also will significantly increase Medicare outlays. If necessary, the policy could be phased in over several years. Nevertheless, ProPAC believes relief to Medicare beneficiaries should not wait until the implementation of prospective payment for these services.

A related problem with Medicare's hospital outpatient payment method for most ambulatory surgeries, radiology procedures, and diagnostic services should be corrected at the same time. Payments are based on a formula that combines hospital-specific costs or charges with a prospective rate. The facility-specific proportion is reduced by 20 percent to reflect the beneficiary's coinsurance. The other portion of the payment is based on 80 percent of the applicable prospective rate. Because the second part of the formula reflects the incorrect assumption that 20 percent of the prospective rate equals 20 percent of charges, Medicare program payments are not reduced by the full amount of beneficiary coinsurance. This results in hospitals receiving higher payments than were intended, the so-called formula-driven overpayment. The discrepancy between what should have been paid and what actually was paid has been increasing each year because hospital charges continue to grow faster than the prospective rates. Therefore, the formula should be corrected as soon as possible.

Both of these problems provide incentives for hospitals to raise their charges, thereby increasing beneficiary liability and total payments. Further, the difference between what payments should be and actual payments widens.

In view of the relationship between these two problems and their off-setting cost effects, the Commission recommends correcting them simultaneously. The payment formula flaw will result in outlays that are nearly $1.7 billion higher than intended in 1996, according to HCFA. The savings from eliminating this flaw could be used to help offset the higher program costs related to lower beneficiary copayments. Depending on assumptions about behavioral responses to the payment change and when it is implemented, correcting the formula could finance between one-quarter and one-half of the increased payments resulting from reducing beneficiary liability. Some legislative proposals include correcting the payment formula to achieve budget savings. Given the related nature of these two problems and the magnitude of beneficiary coinsurance payments, however, they should be addressed together.

Appendixes

Appendix A. Background Material and Analyses

Appendix A provides background material and analyses to support some of the recommendations in this report. An historical overview of the prospective payment system (PPS) operating updates and the Prospective Payment Assessment Commission's (ProPAC) update framework are presented. In addition, this appendix includes technical materials on the individual components of the PPS operating update framework: the PPS hospital market basket, scientific and technological advances, productivity improvement, and case-mix change. The PPS capital update framework and the update for payments to dialysis facilities also are discussed. Further analyses supporting Commission decision making are available in ProPAC's Technical Report Series. These reports, which can be obtained by contacting the Commission, are abstracted in Appendix B.

HISTORICAL OVERVIEW OF PPS OPERATING UPDATES AND THE COMMISSION'S UPDATE FRAMEWORK

The Prospective Payment Assessment Commission (ProPAC) annually recommends an update to the operating payment rates under Medicare's prospective payment system (PPS). The recommendation is based on a framework that takes account of changes in the costs of goods and services hospitals use to furnish care to Medicare patients, adjusted for changes in the mix of resources consumed and the types of patients treated.

The Commission is making its eleventh PPS update recommendation this year. This section of the appendix briefly reviews past ProPAC update recommendations and their components, along with information on the updates that were implemented (see Table A-1). In addition, the relative stringency of the updates is examined by comparing them to forecasted and actual market basket increases. This provides a picture of the relationship between expected and actual input price increases and Medicare hospital payment rates.

History of the Commission's Update Recommendation

The Commission's update recommendations have three parts: factors related to hospital input price increases (the market basket and forecast error correction); a set of discretionary adjustments for scientific and technological advances (S&TA), hospital productivity improvements, and site of care substitution; and case-mix adjustments to account for upcoding and unmeasured case-complexity increases. From fiscal years 1988 to 1995, the Commission recommended different update amounts for urban and rural hospitals.

The PPS Hospital Market Basket—The PPS hospital market basket index measures the prices of goods and services used by hospitals in providing inpatient care. As hospital input prices increase, the costs of delivering the same care in the same way rise proportionately. The projected change in the market basket index is thus an integral component of the Commission's PPS update recommendation.

The market basket consists of 28 components reflecting the full range of goods and services that hospitals purchase. Each component has a weight

Table A-1. Comparison of Increases in Hospital Market Basket, Average PPS Updates, and PPS Payments Per Case, Fiscal Years 1984-1995 (In Percent)

	Hospital Market Basket		Average PPS Update			
Fiscal Year	Forecasted[a]	Actual	ProPAC Recommendation[b]	HCFA Recommendation	Actual	PPS Payments Per Case[c]
1984	4.9%	4.9%	—	4.7%	4.7%	18.6%
1985	4.0	3.9	—	4.5	4.5	10.5
1986	4.3	3.9	1.5%	0.0	0.5	3.3
1987	3.7	3.5	1.7	0.5	1.2	5.3
1988	4.7	4.7	2.3	0.8	1.5	5.9
1989	5.4	5.5	4.2	2.7	3.3	6.6
1990	5.5	4.6	4.1	4.0	4.7[d]	6.2
1991	5.2	4.3	4.7	3.7	3.4	5.7
1992	4.4	3.1	3.0	3.0	3.0	4.9
1993	4.1	3.0	2.8	2.7	2.7	3.7
1994	4.3	2.5	3.6	2.6[e]	2.0	3.1
1995	3.6		2.6	2.0	2.0	3.0

[a] Based on data available when final PPS rule was issued.

[b] Based on ProPAC's annual *Report and Recommendations to the Congress* and market basket forecast when final PPS rule was issued.

[c] Increases for 1984 through 1991 based on data from Medicare Cost Reports, which correspond to hospital cost reporting periods, rather than Federal fiscal years. Increases for 1992 through 1995 based on PPS update and estimated case-mix index increase.

[d] Actual updates for fiscal year 1990 adjusted to reflect 1.22 percent across-the-board reduction in DRG weights.

[e] Annual update based on HCFA's recommendation that rates be frozen at the 1993 level through January 1, 1994.

SOURCE: ProPAC.

that represents its proportion of total hospital expenses. Because data are not available on actual changes in individual prices, the price change for each component is measured by a proxy based on indexes published by the Bureau of Labor Statistics.

In deriving an update, a forecast of the market basket is used. Data Resources, Inc. (DRI) develops the market basket forecast for the Health Care Financing Administration (HCFA) using complex statistical models that project the expected change for each of the 28 market basket components. The forecasts are updated every three months, and ProPAC uses the one most recently available to make its update recommendations. HCFA also uses the most recent forecast when implementing the update.

ProPAC has generally used HCFA's PPS hospital market basket when making its update recommendations. Over the years, however, the Commission has recommended a number of improvements to the market basket, many of which HCFA has adopted. In its first report in 1985, the Commission recommended using a blend of wage price proxies that were both internal and external to the hospital industry. HCFA's original hospital market basket (used for the fiscal year 1984 and 1985 updates) included only one wage price proxy, which was specific to the hospital industry. In the Commission's view, this allowed hospital industry behavior to influence the market basket increase, which was undesirable. The blended approach, which HCFA implemented with the fiscal year 1986 update, is less susceptible to this problem, while continuing to reflect actual input price changes faced by hospitals. It categorizes hospital workers into eight separate groups, each with its own wage price proxy. For the largest group, professionals and technicians, a 50-50 blend of a hospital-specific wage price proxy and an economywide professional and technical worker wage price proxy is used to measure inflation. For the seven other groups of hospital workers, which include managers, clerical workers, and service workers, only non-hospital wage price proxies are used.

In fiscal years 1989 and 1990, the Commission recommended changes both to the benefit price proxy and to how hospital-specific wages were weighted in the market basket. HCFA adopted many of the Commission's recommendations when the market basket was rebased for the fiscal year 1991 update. However, the agency rejected ProPAC's position on how hospital industry wages and benefits should be weighted in the market basket.

Adjustment for the Difference Between HCFA and ProPAC Market Baskets—Even though HCFA has made many changes to the market basket, its current configuration does not give sufficient weight to the hospital-specific wage and benefit price proxies. Internal hospital-specific wages and benefits make up only 30 percent of the wage portion of HCFA's current market basket. Hospital-specific wages and benefits should represent 50 percent of the total, in ProPAC's view. Further, HCFA's market basket generally understates the extent to which professional and technical workers' wages affect the overall change in hospital input prices. The Commission has thus established an adjustment in its update framework to reflect the difference between its own and HCFA's market baskets. ProPAC used its version of the market basket in its fiscal year 1990 and 1991 update recommendations, and since 1992 has used a separate adjustment factor for the difference between the two forecasts. Generally, the difference in the two market baskets has been quite small, 0.2 percentage points or less.

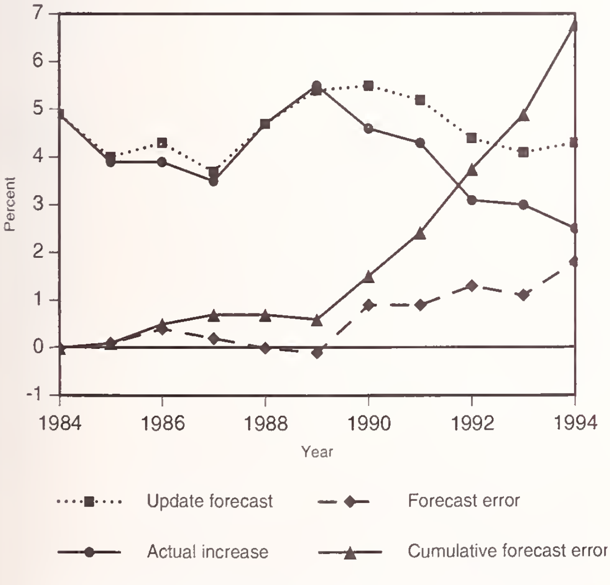
Market Basket Forecast Errors—The Commission also includes in its update framework an adjustment for market basket forecast errors. Currently, ProPAC corrects for these errors with a two-year lag. Thus, the fiscal year 1995 update recommendation corrected for errors in the market basket forecast used to update the 1993 PPS payment rates. ProPAC corrects only for substantial errors—those greater than 0.25 percentage points.

Prior to the fiscal year 1991 update, the Commission corrected for forecast errors with a one-year lag. This proved problematic, however, because the forecast error estimate used in the recommendation was *itself* a forecast and subject to error. In ProPAC's fiscal year 1990 update recommendation, for example, the fiscal year 1989 forecast error was estimated to be 0.6 percentage points when the Commission's report was published. However, by the time of the final rule, the estimated error was close to zero. These miscalculations in the market basket forecast error estimate could provide the Congress and others with potentially misleading information as they consider an appropriate update to the payment rates. Thus, starting with ProPAC's fiscal year 1991 update recommendation, market basket forecast errors are corrected with a two-year lag, to avoid using a forecast to estimate the forecast error.

Forecast errors have had a significant effect on the Commission's recommendations (see Figure A-1). There was little error in the forecasts throughout the 1980s. Since 1990, however, the forecast in the hospital market basket has been at least 0.9 percentage points higher than the actual increase in the market basket every year. The 1.8 percentage point error in the fiscal year 1994 forecast was the largest thus far. The cumulative effect of these errors is significant, totaling more than 6 percentage points since 1990. Since the Congress has generally set the annual updates in law without explicitly considering market basket forecast errors, payments also grew about 6 percentage points more than implied by the legislated update over this time.

Examining trends in the actual and forecasted market basket increase leads to a number of observations about how the two indexes relate to one another. The actual increase has fallen annually since peaking in fiscal year 1989 at 5.5 percent; in fiscal year 1994, it dropped to an all-time low of 2.5 percent. By contrast, the PPS hospital market basket forecast used to update payment rates peaked in fiscal year 1990, at 5.5 percent. The forecasts through fiscal year 1994 show a general downward trend, but remain above 4 percent. This compares with actual increases ranging from 2.5 percent to 3.1 percent between fiscal years 1992 and 1994. The forecasts have thus not dropped as sharply as the actual rate of increase.

Figure A-1. PPS Hospital Market Basket Increases, Forecasts, and Errors, 1984-1994 (In Percent)



SOURCE: ProPAC analysis of the Health Care Financing Administration's PPS market basket forecasts.

Although the forecasts used to update the PPS rates have tended to decline, they have been higher than the actual market basket increase in the previous year. This indicates that an upturn in inflation was anticipated. For example, the actual increase in the market basket for fiscal year 1992 was 3.1 percent. Instead of anticipating that inflation would hold around that level in 1993, the market basket was forecast to increase by 4.1 percent. The market basket forecasts have included an anticipated upturn in inflation of more than 0.6 percentage points in every year but one since 1991. However, this increase in inflation has yet to occur, and in the current economic environment it may be difficult to anticipate when it will. The market basket is still forecast to increase by 3.3 percent in fiscal year 1995 and 3.9 percent in fiscal year 1996.

Trends in Update Adjustments—The Commission has included other adjustments in its update framework to account for the increasing costs of scientific and technological advances and to encourage improvements in hospital productivity (see Table A-2). In its first three update recommendations (fiscal years 1986, 1987, and 1988), ProPAC also included an adjustment for site of care substitution. This adjustment was used to remove costs from the payment rates that were originally included in the base payment amounts but reflected services that were no longer provided in the inpatient setting (such as preadmission testing). All three of these adjustments were combined into a measure called the discretionary adjustment factor (DAF). After the site of care substitution adjustment was discontinued, the S&TA allowance and productivity target were combined into the DAF. The adjustment was called "discretionary" because precise estimates for each component were not

Table A-2. ProPAC's Decisions on Update Adjustments, 1986-1995 (In Percent)

Year	Scientific and Technological Advances	Productivity	Discretionary Adjustment Factor*	Site of Care Substitution
1986	1.5 to 2.0%	-1.5 to -2.0%	0.0%	-1.0%
1987	0.7	-1.5	-0.8	-0.6
1988	0.5	-1.0	-0.5	-0.3
1989	0.5	-0.5	0.0	0.0
1990	—	—	0.0	—
1991	—	—	0.0	—
1992	0.7	-0.5	0.2	—
1993	1.0	-1.0	0.0	—
1994	1.0	-0.5	0.5	—
1995	0.3	-0.7	-0.4	—

* The discretionary adjustment factor shown is the combination of the scientific and technological advances allowance and productivity target. This adjustment, however, has included other elements in the past, such as the site of care substitution and case-mix change adjustments. ProPAC stopped combining the scientific and technological advances and productivity adjustments into the discretionary adjustment factor with its 1994 update recommendation. The net adjustment is shown for these years for illustrative purposes.

SOURCE: ProPAC.

available and thus were subject to the Commission's best judgment, supported by staff analysis.

With its fiscal year 1994 recommendations, ProPAC moved away from combining the scientific and technological advances allowance and productivity target into a single discretionary adjustment factor. The net of the S&TA and productivity adjustments has ranged from −0.8 percentage points to 0.5 percentage points. Five times between fiscal years 1986 and 1995, the two factors have offset each other exactly.

Scientific and Technological Advances—Except for the Commission's first update recommendation for fiscal year 1986, the S&TA allowance has varied from 0.3 percentage points to 1.0 percentage points. The fiscal year 1995 allowance of 0.3 percentage points was the lowest the Commission has made.

The allowances for fiscal years 1986 through 1989 represented ProPAC's judgments about the funds required to cover increased hospital operating expenses for the use of both low- and high-cost quality-enhancing, cost-effective technologies. It was thought that most of these dollars would be needed to cover costs related to the diffusion of existing technologies, rather than the introduction of new ones. The allowance also included costs associated with changes in practice patterns that enhance quality and effectiveness, but were not represented in the allowance for real case-mix change. A technology-specific approach was used starting with the fiscal year 1987 update recommendation.

In its fiscal year 1990 and 1991 update recommendations, the Commission decided against setting an explicit allowance for scientific and technological advances and productivity. Instead, the update recommendation included a net adjustment of zero, with the two factors off-setting each other. ProPAC did this because it thought that, as in other industries, hospitals should fund their future technology acquisitions through improvements in productivity.

Since its update recommendation for fiscal year 1992, the Commission specifically has quantified a scientific and technological change estimate each year. In both the 1992 and 1994 recommendations, the allowance exceeded the productivity target. This reflects the expectation that hospitals could only partially finance the cost of scientific and technological advances with productivity gains in those years.

ProPAC reexamined its method for estimating the S&TA allowance with its fiscal year 1995 update recommendation. As in previous years, it used a technology-specific approach, but the validity of the results was strengthened with the addition of a review process involving an interdisciplinary panel of experts.

Productivity—The productivity adjustment is negative, reflecting the savings that should accrue to the Medicare program when productivity increases. It has varied from −1.5 percentage points to −0.5 percentage points. The productivity target has always reflected the Commission's expectations that hospitals should be able to achieve gains in productivity each year. ProPAC's position is that it is both desirable and appropriate for productivity and efficiency gains to be translated into price reductions. These productivity gains should be shared equally between the Medicare program and the hospital industry. ProPAC's productivity adjustment in the update has thus been set at half the target productivity gain.

Past productivity trends serve as a guidepost in ProPAC's determination of a productivity target for the future. Actual productivity improvements, however, have fallen short of expectations.

The Commission lowered its productivity target annually between fiscal years 1986 and 1989. This was due to two factors: Analyses of various hospital productivity measures showed little improvement in labor productivity, and it did not appear that hospitals would be able to expand their productivity substantially as PPS matured.

For fiscal years 1990 and 1991, the Commission did not specify a productivity target. It did, however, expect hospitals to finance any technology advances with productivity increases during these years. Starting with its fiscal year 1992 update recommendations, ProPAC examined two additional productivity measures. The first is intermediate or service-level productivity, which provides information on how efficient hospitals are in producing services such as laboratory tests and surgeries. The second is case-mix constant service intensity, which examines changes in the number of services hospitals furnish in treating each patient, after controlling for the complexity of patients treated. In its analysis for the fiscal year 1994 update recommendation, the Commission began to incorporate capital inputs into its productivity measures.

Also in the fiscal year 1994 update recommendation, ProPAC applied productivity standards from other sectors of the economy to the hospital industry. Between 1973 and 1989, economywide labor productivity increased 0.9 percent annually. The Commission thus made an adjustment of −0.5 percentage points (about half the anticipated productivity increase of 0.9 percent). Additional economywide data for selected industry groups showed productivity growth to be about 50 percent higher in 1992 and 1993 than it had been in the 1980s. After considering this, ProPAC raised its expectation for hospitals to 1.4 percent in fiscal year 1995 and set an adjustment of −0.7 percentage points in its update.

Case-Mix Adjustments—ProPAC's adjustments for case-mix change are intended to adjust the level of payments so that payments reflect real changes in patient resource requirements rather than upcoding. Historically, the Commission's adjustments for case mix reflect the availability of data. In the early years of PPS, little data were available to help in estimating the three components of the adjustment included in the update framework. Research sponsored by ProPAC and HCFA has added more information on changes experienced in the various case-mix components and thus has enhanced the Commission's estimates of the components, starting with the fiscal year 1990 update recommendation.

The case-mix index (CMI) change estimate is a negative adjustment in ProPAC's update framework. Its purpose is to remove the effects of upcoding and real case-mix change from the payment. Prior to the fiscal year 1990 update, data on CMI change were scarce, and ProPAC's estimates of this differed substantially from the actual increase. However, with additional years of CMI change data available by 1990, the Commission's estimates have improved. Since fiscal year 1990 CMI change estimates generally have declined, because there have been few substantial changes to the diagnosis-related groups (DRGs) (see Table A-3). They have also declined with the slowdown in the movement of beneficiaries from inpatient to outpatient settings.

Real across-DRG case-mix change is a positive adjustment in the Commission's update framework, reflecting that portion of CMI change caused by growth in patient complexity that is not reflected in the DRG assignment. Estimates of real CMI change were improved by a study that RAND conducted for HCFA and ProPAC. The analysis used data from 1986 to 1988 to identify the portion of

Table A-3. Case-Mix Change Estimates Used in ProPAC's Update Recommendations, 1986-1995 (In Percent)

Update Year	Case-Mix Index Change			Within-DRG Case-Complexity Change	Net Case-Mix Adjustment
		ProPAC Estimate[a]			
	Actual	Total	Real		
1986	5.6%	2.0%	0.8%[b]	–	-1.2%
1987	2.9	1.0	0.2	0.7%	-0.1
1988	2.6	1.3	0.8	0.5	0.0
1989	3.5	1.5	0.9	0.5	-0.1
1990	2.7	3.0	1.5	0.8	-0.7
1991	2.2	2.7	1.5	0.7	-0.5
1992	2.7	2.5	1.3	0.2	-1.0
1993	1.9	2.5	1.5	0.3	-0.7
1994	1.0	2.0	1.4	0.4	-0.2
1995	1.1[c]	0.9	0.7	0.2	0.0

Note: Actual case-mix index change is for the year preceding the update year; thus, the estimate for the 1995 update year is of the 1994 case-mix index change.

[a] Estimates of case-mix index change used for ProPAC's annual recommendation. Total case-mix index change is a negative adjustment in ProPAC's update framework.

[b] Estimate was for both real across-DRG case-mix change and within-DRG case-complexity change.

[c] Estimate.

SOURCE: ProPAC.

CMI change that was due to real increases in patient complexity. Completed in 1989, the study results were first reflected in the Commission's 1990 update recommendation. ProPAC's estimates of real across-DRG change remained close to 1.5 percent between fiscal years 1990 and 1994. Recently, as the observed CMI fell to 1.0 percent, the Commission's estimate of real CMI change also dropped. The proportion of the change thought to be real, however, went up as total CMI change decreased.

The net of these first two adjustments, total CMI change and real across-DRG case-mix change, is the Commission's estimate of upcoding, or that portion of CMI change caused by changes in coding practices rather than growth in patient complexity. Upcoding estimates have declined steadily since fiscal year 1990. This is because opportunities for coding changes provided by significant revisions in the DRGs have been limited over this period. Upcoding estimates have dropped from 1.5 percentage points in the fiscal year 1990 update to 0.2 percentage points in the fiscal year 1995 update.

The Commission's estimate of within-DRG case-complexity change is a positive adjustment that accounts for real case-mix changes not captured by the CMI. Between fiscal years 1990 and 1995, a series of studies conducted by SysteMetrics for ProPAC was used to develop estimates for within-DRG case-complexity change. The estimates of this portion of case-mix change also have declined since the fiscal year 1990 recommendation, when it was 0.8 percentage points. In ProPAC's past four update recommendations (fiscal years 1992 through 1995), this adjustment has varied from 0.2 percentage points to 0.4 percentage points. The declining estimates correspond to an observed slowdown in the growth of Medicare beneficiary patient complexity.

The Commission's net case-mix adjustment—the combination of all three components discussed—has varied over the years, ranging from −1.2 percentage points to zero percentage points. After four years (fiscal years 1990 to 1993) of adjustments between −0.5 and −1.0 percentage points, ProPAC recommended extremely small adjustments in fiscal years 1994 and 1995, reflecting the slower rate of increase in the CMI and the perceived decline in upcoding.

Differential Updates—Starting with fiscal year 1988, the Commission recommended that rural hospitals receive a larger payment update than urban hospitals. In its March 1990 *Report and*

Recommendations to the Secretary of Health and Human Services, ProPAC recommended eliminating the differential in standardized amounts between rural and other urban hospitals over a three-year period.[1] Higher updates were provided to rural hospitals through fiscal year 1995, when the separate rural payment amount was finally eliminated. In the fiscal year 1990 update, the Commission also recommended that large urban hospitals receive a higher update than other urban hospitals. Hospitals in large urban areas received higher updates than other urban hospitals in both fiscal years 1989 and 1990. Payment rates for large urban hospitals are 1.6 percent above those for other hospitals as a result.

Stringency of PPS Hospital Payment Updates

The stringency of the legislated update can be judged by comparing it to the forecasted and actual increases in the hospital market basket. This latter comparison is especially important considering the substantial error in market basket forecasts since fiscal year 1990 (see Figure A-1).

PPS payment rates are updated by the projected increase in the hospital market basket index. Historically, the Congress has set the update equal to the market basket forecast plus or minus some amount. Between fiscal years 1986 and 1989, the average update legislated by the Congress was market basket minus 2.9 percentage points. This is the average increase in PPS payment rates relative to the market basket forecast at the time the update was set. The update hospitals received relative to the actual increase in the market basket over this period was market basket minus 2.8 percentage points. Thus, forecast errors did not play a significant role in these early updates.

More recently, however, errors in market basket forecasts have been larger. The average legislated update, relative to the forecasted market basket, was market basket minus 1.5 percentage points between fiscal years 1990 and 1994 (see Table A-4). The update hospitals received, however, was only 0.3 percentage points lower than the actual market basket increase. The updates therefore have been less stringent than if the forecasts had been accurate.

Table A-4. Annual PPS Updates Relative to PPS Hospital Market Basket Increase, 1990-1994 (In Percent)

Update Year	ProPAC Recommendation[a]	ProPAC Recommendation Less Forecast Error[b]	Actual Update Relative to Forecasted Market Basket[c]	Update Relative to Actual Market Basket Increase[d]
1990	-0.8%	-1.4%	-0.8%	0.1%
1991	-0.5	-0.5	-1.8	-0.9
1992	-1.4	-0.4	-1.4	-0.1
1993	-1.3	-0.5	-1.4	-0.3
1994	-0.7	0.4	-2.3	-0.5
Average 1990-1994	-0.9	-0.5	-1.5	-0.3

Note: These updates are relative to the PPS hospital market basket increase. For example, the average update ProPAC recommended in 1994 was the PPS hospital market basket minus 0.7 percentage points, or 3.6 percent, relative to a 4.3 percent market basket increase.

[a] Based on information from ProPAC's annual *Report and Recommendations to the Congress*.

[b] This column represents ProPAC's update recommendation with no market basket forecast correction factor. It shows ProPAC's recommendation assuming market baskets were always forecasted correctly.

[c] This is the average update actually implemented relative to the forecasted market basket in the Health Care Financing Administration's final rule published annually in the *Federal Register*.

[d] This is the actual update hospitals received relative to the actual increase in the PPS hospital market basket. For example, in 1994, hospitals received an average update of 2.0 percentage points. The actual increase in the market basket in 1994 was 2.5 percent. Thus, the relative update was market basket minus 0.5 percentage points.

SOURCE: ProPAC.

Primarily because of case-mix index increases, PPS payments per case grow faster than the update. Between 1990 and 1994, the average increase in PPS payments per case, relative to the actual increase in the PPS hospital market basket, was market basket plus 1.0 percentage points. Thus, despite a series of what initially appeared to be stringent updates between 1990 and 1994, per case payments continued to grow faster than hospital input price inflation. If the market basket had been forecasted accurately, however, PPS payments per case would have risen 0.3 percentage points less, on average, than the market basket each year.

Conclusion

The Commission's update framework has evolved over time. With experience in using the framework and with better data for estimating its components, ProPAC's update recommendation provides a reasonable indication of the payment rate increase necessary each year to furnish quality inpatient care to Medicare beneficiaries.

Each of the adjustments in the update is important. The S&TA allowance provides additional funds for quality-enhancing technological advances that otherwise are not reflected in the market basket. The productivity adjustment recognizes that hospitals should achieve efficiency gains similar to those in other industries and that the Medicare program should share in the resulting savings. The case-mix adjustment allows payment rates to reflect real changes in patient complexity, while removing the effects of upcoding.

The PPS hospital market basket index is the central measure of hospital input price inflation used by the Commission in its update recommendation and by HCFA in implementing the legislated updates. Since 1990, however, market basket forecasts have been much higher than actual hospital input price inflation. ProPAC includes a market basket forecast error correction factor to adjust the update so that the effects of these erroneous projections are removed from the base payment rates and are not perpetuated.

The PPS updates have been below the forecasted increase in the market basket index in every year except one. However, the stringency of the updates is best examined by comparing payment rate increases to the actual rise in the hospital market basket. The recent errors in the market basket forecasts have led to payment updates that were much closer to hospital input price inflation than originally expected when the updates were implemented. The end result, when combined with case-mix index growth, is that hospital payments per case have risen faster than hospital input price inflation.

PPS HOSPITAL MARKET BASKET

The PPS hospital market basket is an integral part of the update framework. The market basket index measures changes in the prices of a fixed basket of goods and services used as inputs by hospitals in providing inpatient care. This index is in many respects similar to the consumer price index (CPI), which measures changes in prices for a fixed basket of goods and services consumers purchase. The Secretary uses the PPS hospital market basket to set annual hospital payment updates. ProPAC uses it in its operating update framework as the central measure of price inflation faced by hospitals.

The market basket consists of 28 components—from employee wages and benefits, hospital malpractice insurance, and utilities to pharmaceuticals and postage—reflecting the full range of goods and services that hospitals buy. Capital expenses are excluded, however. Each component has a weight that represents its proportion of total hospital expenses. Relevant price proxies from the Bureau of Labor Statistics are used to measure price changes for all but one of the components.

Fiscal Year 1996 PPS Hospital Market Basket Forecast

The forecasted value for each price proxy is derived from a complex statistical model that is based on past and current economic information. Since 1979, DRI has been under contract to HCFA to forecast changes in the hospital market basket. HCFA uses these forecasts to update the PPS payment rates. ProPAC has also used them in making its annual update recommendation.

DRI updates its PPS market basket forecasts every three months. In making its update recommendation, ProPAC uses the most recently available forecast, which for this report was prepared in December 1994. This forecast indicates that the fiscal year 1996 increase in HCFA's PPS hospital market basket index will be 3.9 percent. This contrasts with an expected 3.4 percent rise in the CPI for urban consumers in fiscal year 1996. The price of many market basket components is expected to rise far faster than the increase in the CPI. Employee benefit costs—which account for about 10 percent of the hospital market basket—are expected to rise by 5.9 percent. Similarly, utility prices are expected to increase by 4.8 percent and pharmaceutical prices by 5.6 percent. Wage and salary growth is not a major contributor to the market basket's rise above the CPI, since it is expected to grow by 3.5 percent. Certain occupational categories, however, are expected to see higher increases, such as the 4.1 percent for service workers.

The forecasts may change as more recent data become available. ProPAC has expressed concern about HCFA's forecasts and the tendency to overestimate the market basket (see Historical Overview in this appendix). In addition, the increase in the market basket may change somewhat as its weights are revised this year to reflect more current shares of hospital spending for the various market basket components.

Adjustment for the Difference Between HCFA and ProPAC Market Baskets

ProPAC's version of the PPS hospital market basket differs from that used by HCFA. The Commission's market basket gives greater weight to the internal hospital industry wage and benefit price proxies. Within the wage and benefit components, the Commission assigns a 50 percent share to hospital industry wage and benefit proxies, while HCFA's gives these only a 30 percent weight. Further, there are some other technical differences in how the various wage and benefit price proxies are combined that also can affect the average compensation increase provided by the index.

Because of these dissimilarities, the index based on ProPAC's version of the market basket generally differs from the one based on HCFA's version. As a result, the Commission's update recommendation includes an adjustment for the difference between its market basket and HCFA's. For fiscal year 1996, however, the forecasted increase in both ProPAC's and HCFA's market basket is 3.9 percent. To recognize the conceptual difference between these two market baskets, the Commission has included an adjustment of zero percentage points in its recommendation for fiscal year 1996.

Correction for Fiscal Year 1994 Forecast Error

There may be substantial discrepancies between the forecasted increase in the market basket index and its actual value in any given year. This is because for each year, PPS rates are set prospectively based on data available before the year actually begins. Unforeseen world events and changing national economic conditions may result in unanticipated price fluctuations that can substantially affect the hospital market basket. Furthermore, the forecasting models also could be subject to error as historical patterns of cost growth for various price indexes included in the market basket change.

Substantial discrepancies between forecasted and actual increases in the market basket index can result in large overpayments or underpayments to hospitals under PPS. The Commission thus includes in its update framework an adjustment for substantial errors in market basket forecasts (those exceeding 0.25 percentage points). This adjustment is intended to remove the effects of any forecast errors from the PPS payment base. It is determined at the end of the year using data on the actual increase in the market basket index. Because of the timing of these data, there is a two-year lag in the correction of market basket forecast errors. The fiscal year 1996 update recommendation therefore includes a correction factor for errors in the fiscal year 1994 market basket forecast.

The forecasted market basket increase used to calculate the update factor for the fiscal year 1994 PPS payment rates was 4.3 percent. The actual increase in the fiscal year 1994 market basket, however, was only 2.5 percent. To account for this discrepancy, the Commission's 1996 update recommendation includes a market basket forecast error correction factor of −1.8 percentage points.

The largest contributor to the fiscal year 1994 forecast error was wage and benefit growth that was much lower than expected, accounting for about half the error. Specifically, actual wage and benefit increases for professional and technical workers and hospital workers were much lower than projected, and together accounted for 0.5 percentage points of the error. Lower than projected utility prices also contributed to the forecast error. Instead of growing by 4.1 percent, they fell by 3.5 percent, accounting for 0.2 percentage points of the error. Factors each contributing about 0.1 percentage points to the error were lower than expected increases in the price proxies for malpractice insurance, pharmaceuticals, chemicals, paper products, postage, and business services.

SCIENTIFIC AND TECHNOLOGICAL ADVANCES

ProPAC believes Medicare payment policy should have a neutral effect on technological advancement. That is, payment levels should not inhibit the development or diffusion of new technology applications or result in their inappropriate adoption. Thus, in its annual payment update recommendations to the Congress, the Commission includes an allowance for scientific and technological advances. This allowance is a future-oriented policy target intended to support the appropriate applications of technological advances that improve quality of care for Medicare beneficiaries.

Each year, the Commission examines the effect of such advances on PPS operating costs, PPS capital costs, operating costs for facilities excluded from PPS (which are paid based on their costs relative to a target amount), and dialysis facilities' costs incurred under the composite rate. ProPAC has employed a technology-specific approach to estimating the S&TA adjustments. The first step is to identify technologies on the basis of specified criteria, and then estimate the incremental cost per discharge of using each technology. The next step estimates the number of Medicare beneficiaries likely to use the technology, multiplied by the per discharge cost to calculate the increased Medicare expenditures related to that technology. The estimates developed for each technology are then summed and expressed as a proportion of projected Medicare payments.

For the fiscal year 1996 estimates for PPS operating and capital costs, however, the Commission has chosen to use a qualitative process: evaluating more generally whether any changes in technology costs have altered the trend established in previous years. This discussion highlights that process and presents the results for the two PPS estimates. First, the scope of the S&TA allowance is reviewed briefly, including the criteria ProPAC uses to identify technologies for inclusion in the cost estimation process. Next, the range of the allowances set by the Commission in previous years is described. The types of technologies included in these estimates are then discussed, and advances that may affect Medicare costs during fiscal year 1996 are explored. Finally, the Commission's decisions for the PPS operating and capital S&TA allowances for fiscal year 1996 are presented.

A complete description of ProPAC's S&TA study for fiscal year 1996, along with an evaluation of ProPAC's technology-specific methodology, will be available in the forthcoming technical report, *A Review of ProPAC's Allowances for Scientific and Technological Advances.*

Scope of the S&TA Allowance

The scope of ProPAC's S&TA allowance includes emerging, quality-enhancing, cost-increasing uses of technologies. Emerging refers to a new application of a technology. Incremental costs can occur from either the introduction of a new technology or a new application of an existing one.

Scientific and technological advances often are adopted by hospitals to improve the quality and effectiveness of services. The Commission believes Medicare should support appropriate technology applications that are quality-enhancing for its beneficiaries. The S&TA allowance therefore includes only those applications.

The S&TA estimate reflects the incremental cost-increasing effect of technology applications. ProPAC's approach identifies the technologies that are expected to contribute most to increases in facility costs. After a technology is identified, the estimation nets the cost-increasing and any cost-decreasing effects for that technology, including in the S&TA estimate only those technologies resulting in a net increase.

ProPAC's methodology incorporates these considerations into the four criteria used for identifying technologies. First, technologies are included only if they are projected to have a substantial cost-increasing effect on Medicare costs. Second, only technologies that are expected to be at least 5 percent diffused in the Medicare population are included. That is, of the Medicare beneficiaries who are potential candidates for the treatment, at least 5 percent must be expected to receive it in that fiscal year. Third, technologies where more than 75 percent of the candidates are expected to receive the treatment are excluded. And, fourth, each technology must be considered safe and effective, as indicated by approval from the Food and Drug Administration (FDA) or other relevant agency, or, when appropriate, through general acceptance by the scientific community.

S&TA Allowances in Prior Years

Allowances for cost increases associated with technological change have been a component of ProPAC's update framework for PPS operating payments since fiscal year 1986. Beginning with its recommendations for fiscal year 1994, ProPAC extended this framework to the development of a capital update recommendation.

Prior Operating S&TA Allowances—The Commission has set allowances for operating costs associated with scientific and technological advances for each fiscal year since 1986. The update process for fiscal year 1986 did not use the technology-specific methodology employed in subsequent years. The range for the operating S&TA allowance for fiscal years 1987 through 1995 is 0.3 percent to 1.0 percent of total projected Medicare operating payments.

The scope of the allowance has differed from year to year, based on the Commission's discretion. For example, in the first few years of PPS, the Commission decided to raise the estimate to reflect the omitted incremental costs of technologies with relatively small cost contributions.

For fiscal years 1990 and 1991, the Commission simultaneously evaluated the projected changes in costs attributable to S&TA and to productivity, opting to set a net allowance of zero rather than separate allowances for each. This represented the Commission's belief that, like other industries, hospitals should fund their future technology acquisitions with improvements in productivity. This position was modified the following year when the Commission stated that, for fiscal year 1992, it was reasonable to expect hospitals to partially, but not fully, finance anticipated costs related to technological advances with productivity gains during that year.

For the fiscal year 1995 update recommendations, ProPAC reexamined its approach to estimating costs attributable to S&TA, clarifying the intent and scope of the allowance and the assumptions and parameters for estimation. The validity of the estimates was strengthened by adding a review process, involving a panel of clinical and technology experts. The panel discussions centered on quality-enhancing uses of the identified technologies, their levels of effectiveness, and comparison with alternative technologies.

The need for the Commission's discretion in setting the S&TA allowance was evidenced in the example of monoclonal antibodies. The operating S&TA allowances for fiscal years 1992, 1993, and 1994 included the use of a monoclonal antibody (E5 and HA-1A) for sepsis. It was believed that this agent had the potential to significantly affect hospital operating costs because of its extremely high cost and widespread applicability.

FDA approval of this agent was pending at the time the S&TA estimate for fiscal year 1992 was being developed. Nonetheless, approval was anticipated early enough that use of the agent would affect treatment costs for Medicare patients during the fiscal year, and so it was included in the S&TA estimate. Subsequent clinical trials failed to provide convincing evidence of effectiveness, however, and thus the FDA withheld its approval. An additional concern was the uncertainty in identifying appropriate candidates for treatment. Approval still looked promising, nonetheless, and the agent was again included in the S&TA study for fiscal year 1993. Although it still lacked FDA approval, the cost of using this agent for Medicare beneficiaries during fiscal year 1994 was projected to be $475 million. This was roughly half of the total projected rise in operating costs associated with S&TA for that year.

Given that FDA approval had been uncertain for so long, the Commission was concerned about the weight that the costs associated with the monoclonal antibody added to the S&TA estimate. For the fiscal year 1994 allowance, the Commission decided to discount the 1.5 percent estimate to 1.0 percent, to include only a portion of the costs associated with the antibody. In fact, E5 and HA-1A subsequently were withdrawn from the market because unacceptable mortality levels were associated with the treatment.

Prior Capital S&TA Allowances—In fiscal year 1992, the basis of paying PPS hospitals for inpatient capital costs changed from a retrospective to a prospective, per case rate. Beginning with its fiscal year 1994 recommendations, ProPAC applied its update framework for operating payments to capital payments as well. For fiscal year 1994, the capital S&TA allowance was 0.4 percent of projected total capital payments; for fiscal year 1995, it was 0.9 percent.

ProPAC uses the same general approach to develop the S&TA estimates for operating and capital costs. However, the components of the capital S&TA cost estimate differ from those of the operating S&TA. Operating costs are those related to labor, supplies, and services; typically, the costs of these inputs are borne at the time of use.

Capital costs, by contrast, are those related to the purchase, installation, and financing of buildings and equipment. These costs are spread over the useful life of the asset. To understand how a technology affects annual capital costs, information is needed regarding interest rates, the technology's useful life, and the proportion of the capital costs financed. In ProPAC's methodology, this information is translated into an estimate of expected cash flows for that technology during the fiscal year.

PPS S&TA Estimates for Fiscal Year 1996

ProPAC used a qualitative approach to develop the PPS operating and capital S&TA estimates for fiscal year 1996. The intent of the study was to gauge any *overall* change in uses or costs of emerging technologies. As a starting point, ProPAC first identified the types of technologies included in prior years' estimates. It then tapped key sources of information on these types of technologies for possible changes in fiscal year 1996.

Technologies in Prior S&TA Estimates—At the beginning of each year's S&TA study, a new list of possible technologies is created. After technology-specific analysis, a final list is developed. Examining the lists for prior S&TA estimates revealed that when an emerging technology is introduced to the final list, it also frequently appears in subsequent studies (see Table A-5). Six of the technologies included for fiscal year 1995 have been on the list each year since fiscal year 1990: electrophysiology studies (EP), thrombolytic therapy, implantable cardioverter defibrillators, pacemakers, magnetic resonance imaging (MRI), and the broad category of monoclonal antibodies/radionuclides. Single photon emission computerized tomography (SPECT) has been included in each S&TA estimate since 1991.

Table A-5. Technologies Contributing to PPS Operating Costs Associated with Scientific and Technological Advances, Fiscal Years 1990-1995

	Estimated Incremental Cost Contribution (In Millions)					
Technology	1990	1991	1992	1993	1994	1995
Included each year:						
Electrophysiology studies	$39.8	$13.0	$ 16.9	$ 11.1	$ 25.0	$78.2
Thrombolytic therapy	69.6	39.3	31.9	21.5	22.3	21.6
Implantable cardioverter defibrillators	29.9	99.2	108.8	59.9	106.3	12.9
Pacemaker advances	20.3	18.6	17.1	5.1	23.4	9.3
Magnetic resonance imaging advances	4.8	9.1	11.7	1.5	4.0	7.2
Single photon emission computerized tomography	—	10.2	11.7	29.4	10.9	4.6
Monoclonal antibodies/radionuclides	8.5	12.6	97.5	202.5	475.0	3.5
Included each year except 1995:						
Positron emission tomography	9.0	4.4	11.0	10.7	0.2	—
Low osmolality contrast agents	4.4	37.9	21.1	18.4	23.1	—
Percutaneous transluminal coronary angioplasty	38.8	19.8	20.6	72.6	58.7	—
Recent additions with major contributions:						
Implantable coronary and peripheral stents	—	—	—	—	9.1	44.7
Management information systems	—	5.2	—	66.8	68.4	—
Decision support	—	—	—	—	—	31.2
Pharmacy	—	—	—	—	—	6.8
Radiology	—	—	—	—	—	4.2

SOURCE: ProPAC analysis of reports done under contract by Project HOPE (fiscal years 1990-1994) and Abt Associates, Inc. (fiscal year 1995).

Three technologies that had been included annually were dropped for fiscal year 1995 for various reasons. Positron emission tomography (PET) now is provided primarily in an ambulatory setting; any inpatient activity is mainly for research purposes. Low osmolality contrast agents, used in cardiac imaging, are now fully diffused. The population of new candidates for this treatment is shrinking, as less expensive but safe and effective substitutes are employed. Percutaneous transluminal coronary angioplasty (PTCA) remains a treatment of choice for many Medicare beneficiaries, but it has diffused beyond ProPAC's 75 percent upper limit for inclusion in the S&TA study. Other technologies not shown on Table A-5 were included in the operating S&TA allowances for only a year or two. Among these are cochlear implants, gastro-esophageal anti-reflux devices, and hyperthermia treatments for cancer patients. Two technologies with major cost contributions to the operating S&TA estimates were added to the lists in recent studies: implantable coronary and peripheral stents and management information systems (MIS).

In comparison, the capital S&TA estimates for fiscal years 1994 and 1995 comprised fewer technologies. Management information systems applications were the predominant contributor to costs, representing nearly three-quarters of the estimates for both years. For fiscal year 1995, all the technologies studied to develop the capital estimate also had significant operating costs and were included in the operating estimate.

This review demonstrates that emerging technologies meeting ProPAC's criteria for inclusion in the S&TA estimate often remain a part of the estimate for several years. This suggests that big-ticket technologies tend to emerge and diffuse over a period longer than a single year. In fact, in the past five operating S&TA allowances, not only were two-thirds of the technologies repeats from the prior year, but they represented more than 90 percent of the S&TA cost estimate each year. These technologies tended to fall into four broad categories:

- Cardiovascular drugs, devices, and techniques;
- Radiology, imaging, and nuclear medicine;
- Biotechnology; and
- Management information systems.

Cardiovascular Drugs, Devices, and Techniques—These technologies relate to the management of arrhythmias, acute myocardial infarctions (AMIs), and restenosis of arteries (coronary artery disease). Technologies included in previous S&TA cost estimates that manage arrhythmias are electrophysiology studies, pacemakers, and implantable cardioverter defibrillators. Those used to treat AMIs include thrombolytic drugs (t-PA and streptokinase) and PTCA. Devices and procedures contributing to previous S&TA cost estimates that intervene in coronary artery disease include laser angioplasty, atherectomy, PTCA, and stent implantation.

Radiology, Imaging, and Nuclear Medicine—Prior S&TA technology lists have included MRI; PET; SPECT; ultrasound; computerized axial tomography; stereotactic surgery (gamma knife); and radionuclides ("tags" for scan contrast, or tracers that locate, or locate and kill, tumors). Between fiscal years 1990 and 1995, the costs contributed to the S&TA estimate by these technologies grew smaller relative to the contributions from other technologies on the lists. For example, MRI ranked first on the list of technologies included in the fiscal year 1988 S&TA estimate, and eighth on the list for fiscal year 1995. SPECT, the only other technology in this category on the fiscal year 1995 list, ranked tenth.

Biotechnology—This category represents biosynthetic (often called genetically engineered) products. They are agents produced using recombinant DNA—deoxyribonucleic acid, the substance in each body cell that carries genetic information. Various applications of different monoclonal antibodies have been included in the S&TA cost estimate each year since fiscal year 1990.

Management Information Systems—This is a broad category comprising department-specific systems as well as larger, integrated systems. The scope of the S&TA allowance dictates that these technologies must enhance patient care. The fiscal year 1995 study included decision support systems for patient care (integrated systems) and two departmental systems—for pharmacy and for radiology.

Changes Possible for Fiscal Year 1996—These four broad categories of technologies from prior

S&TA estimates are the logical starting point for assessing changes for fiscal year 1996. ProPAC reviewed several sources of information, starting with the S&TA study completed for fiscal year 1995, and the expert panel's discussion during the same process, which identified technologies expected to grow in diffusion or cost beyond 1995.[2] ProPAC obtained the FDA's list of pre-market approvals for devices since the fall of 1993. Medical studies published in the past year's issues of the *New England Journal of Medicine* or the *Journal of the American Medical Association*, or highlighted in the American Hospital Association's *Technology Scanner,* also were reviewed. Finally, ProPAC noted scientific and clinical advances that were presented or documented in the past year by the American College of Cardiology, the Radiological Society of North America, the Society of Nuclear Medicine, and the American College of Surgeons. Briefly, the most recent professional discussion and research on emerging technologies include the following.

Cardiovascular Drugs, Devices, and Techniques—For the treatment of arrhythmias, a technology deferred to fiscal year 1996 from last year's study is radiofrequency (RF) ablation. This technique, delivering a radiofrequency current via catheter, destroys the heart tissue causing the arrhythmia, while sparing the surrounding, healthy tissue. Theoretically, this would eliminate the need for ongoing anti-arrhythmia medications, defibrillators, or even surgery. Use of RF ablation as a treatment of choice for arrhythmias remains controversial, although its use could become widespread in the future.

Intravascular ultrasound (IVUS) may be the next promising tool for diagnosis and determination of treatment of restenosed vessels. IVUS is a catheter-mounted fiberoptic scope allowing a view of the occluded area of a vessel. Like electrophysiology studies for arrhythmias, IVUS offers the clinician direction in which tool may best open the vessel. However, IVUS most likely will not progress beyond investigational stages during fiscal year 1996.[3]

One recent event associated with cardiac care may have an effect on hospitals' capital costs. The American College of Cardiology and the American Heart Association Joint Task Force on Cardiac Catheterization and Cardiac Cath Labs has recently released PTCA practice guidelines. One of their recommendations is that, unless open-heart surgical backup is readily available, there should be no further development of catheterization laboratories.[4] This guideline may lead to lower Medicare costs if those facilities without surgical backup do not upgrade their aging laboratories. Conversely, Medicare costs may continue to increase if such facilities opt to add capabilities for open-heart surgery, or arrange for surgical backup with a nearby hospital.

Radiology, Imaging, and Nuclear Medicine—Development of software for use with MRI continues to improve the accuracy and quality of the scans. However, many software advances are only compatible with newer generation MRI machines, forcing some hospitals to weigh the quality-enhancing effects of the new software against the steep cost of a new MRI system.

At the 1993 annual meeting of the Radiological Society of North America, the market entry of a new "low-cost" MRI machine to image extremities that takes only one-fourth the physical space of an existing system was announced. In addition, the FDA in 1993 approved the first oral contrast agent (Imagent) for MRI scans, which enhances viewing of the bowel.

The FDA also approved somatostatin, a recombinant hormone used as a radioactive tracer in SPECT imaging of certain cancers (lymphoma, and certain rare neuroendocrine and gastrointestinal tumors). Scientific highlights at the 1993 annual meeting of the Society of Nuclear Medicine included discussion of another monoclonal antibody radiotracer still under investigation—Indium 111—useful for colorectal and gynecological cancers. Also presented at this meeting were advances in SPECT imaging allowing better detail and reduced requirements for scanning time.

Picture archiving and communication systems (PACS)—filmless systems—have made progress, but many obstacles remain. Image quality using PACS now rivals that of film. In addition, the use of digital imaging and communications across medicine is growing rapidly, which makes use of PACS more plausible.[5] However, cost and logistics of transition remain major issues.

Biotechnology—The FDA has, as noted, approved the recombinant hormone, somatostatin, for tumor imaging. Other biosynthetic agents currently in advanced stages of research include a monoclonal antibody (c7E3) for balloon angioplasty patients who are at high risk for restenosis, and two agents for malignant tumor location and destruction (Interleukin 2 and 17-1A).

Management Information Systems—ProPAC's recent national survey of hospitals found that, by late 1993, half of all hospitals had integrated their clinical and financial data, while one-third had integrated systems across clinical departments.[6] Compared with many clinical advances, the timing of MIS acquisitions may be more discretionary. Issues of confidentiality; compatibility (within a hospital, and among a hospital and its associated providers); and cost remain major obstacles to implementation.

However, hospitals' plans for system acquisition, integration, and upgrading also are influenced by the changing demands of payers, particularly managed care entities. In addition, if implemented, the Joint Commission on Accreditation of Healthcare Organizations' Agenda for Change will require electronic submission of certain clinical indicators.

Discussion of Evidence—Given the qualitative approach used in this study of technology costs projected for fiscal year 1996, the question to be answered is: Overall, is an increase, decrease, or no change expected in the growth of S&TA costs?

Evidence related to cardiac technologies, biotechnologies, and management information systems points to the possibility for an acceleration in cost growth related to scientific and technological advances. First, development and use of the various devices and procedures for coronary artery disease will most likely continue to increase, because there is no obvious mechanical means to keep a vessel open reliably and efficiently. The PTCA guidelines recently issued by the American College of Cardiology and American Heart Association Joint Task Force on Cardiac Catheterization and Cardiac Cath Labs may inadvertently drive up procedure volume. Catheterization laboratories lacking open-heart surgical backup may choose to add this capability rather than risk a fall-off in the volume of procedures they perform. Second, progress up the learning curve in the development and use of recombinant agents may accelerate the approval and diffusion of these technologies. This may stimulate costs, particularly if the FDA approves any of the monoclonal antibodies now in advanced stages of research. Finally, the acquisition and upgrading of hospital information systems may intensify as hospitals are pressured to meet the reporting requirements spelled out by payers, particularly managed care entities.

Alternatively, the evidence could suggest a slowing of technology-related cost growth during fiscal year 1996. Much of the incremental cost attributable to radiology and imaging for fiscal year 1995 represents software. Hospital technology assessment task forces increasingly are asking clinicians to include evidence of cost effectiveness with any request for a new, big-ticket scanner. Such scrutiny may help hospitals remain within their technology budgets; however, an accurate picture of cost effectiveness is not always easily developed. In the example of imaging systems, continuing to use an older MRI system rather than upgrading may seem cost effective, but the full benefit of some of the quality-enhancing software advances can be realized only when used with the newer generation hardware. Second, the recently issued PTCA guidelines may discourage a hospital from upgrading its cardiac catheterization laboratories if it lacks open-heart surgery capabilities. This may eventually limit procedure volume. Third, biotechnology products frequently travel a long road to approval and diffusion. When an agent's appropriate applications become clear, it is often only for highly specific clinical situations. Therefore, although generating high per case costs, such an agent would not be used widely, and its costs would not be significant enough to affect the operating S&TA estimate.

This review of technology costs for fiscal year 1996 shows that Medicare expenditures may rise for some technologies, but fall for others. These various incremental costs may or may not offset each other: There is no clear, compelling evidence either way. In addition, it seems to take longer than a year for many technologies to diffuse. That many technologies have been included repeatedly in ProPAC's S&TA studies supports this. Thus, the Commission believes that the rates of cost growth reflected by the PPS S&TA allowances for fiscal year 1995—developed using the more rigorous methodology—are still valid for fiscal year 1996.

For fiscal year 1996, the Commission set the operating S&TA allowance at 0.3 percent of total projected PPS operating payments. In its discussion of the update to PPS capital payments, however, the Commission decided against explicitly setting an allowance for S&TA. Rather, it set a net allowance of zero for S&TA and productivity, assuming any growth in capital costs associated with S&TA would be offset by productivity gains.

PRODUCTIVITY IMPROVEMENT

The productivity adjustment in the Commission's update framework is intended to provide hospitals with a financial incentive to improve productivity, either from the more efficient use of existing inputs or from the adoption of cost-decreasing technologies. The productivity adjustment, together with the S&TA allowance, represents expected changes over time in the quantity and mix of resources used during a hospital stay.

Each year, ProPAC sets a policy target for the amount of productivity improvement it believes is reasonable to expect hospitals to attain in the coming year. A negative adjustment is then made to ProPAC's PPS operating and capital update recommendations equal to one-half the expected increase. This reflects the Commission's belief that the Medicare program and the hospital industry should share equally in the savings resulting from productivity gains. To aid in setting an appropriate target for productivity improvement, ProPAC conducts an ongoing analysis of the trend in hospital productivity and compares this with the trend in other industries.

This section summarizes the methodology, limitations, and results of ProPAC's analysis of productivity change over the 1980 to 1993 period, as well as the Commission's decision regarding the operating productivity adjustment for fiscal year 1996.

Methodology

Productivity is defined as the ratio of outputs to inputs. Increased productivity implies that the hospital is either producing more output with the same resources, or the same output with fewer resources. In this analysis, the data used to quantify hospital outputs and inputs include outpatient services and hospital-based long-term care units.

Aggregate Productivity Measure—ProPAC originally focused on measuring the labor component of hospital productivity. Capital payments were then cost-based while operating payments per case were set prospectively, which distorted hospital decisions on the appropriate mix of inputs. Now that a prospective payment system has been introduced for capital, hospitals can substitute freely among labor, capital, and supply and service inputs. Consequently, the Commission has developed a more comprehensive measure reflecting all of these factors of production. This total factor productivity measure is applicable to both the operating and capital update factors.

Input Measures—ProPAC's labor input measure is the number of full-time equivalent (FTE) employees, with an adjustment for occupation-mix change in the hospital work force. This adjustment uses weights based on average wage levels, obtained primarily from Bureau of Labor Statistics surveys, to translate shifts among personnel classes into FTE changes. The premise of this approach is that, for a given patient load, substituting more costly staff (such as registered nurses for nursing assistants) will have the same productivity reducing effect as hiring additional personnel.

The supply and service measure is based on the overall cost of non-personnel inputs other than capital (for example, intravenous fluids and insurance). The total cost of inputs can rise in only two ways: if more items are purchased or if the prices of the items used climb. Thus, an estimate of input price inflation is subtracted from the total cost change to isolate the increase in input use. Service and supply price changes are represented by a composite of the index values for all non-labor and non-capital components of HCFA's PPS market basket.

Capital inputs are measured by building and equipment assets, with a similar adjustment to remove the effects of price increases. Capital prices are represented by the Boeckh building cost index and the Marshall and Swift hospital equipment index. Hospital net assets are age-adjusted (that is, their purchase prices are trended forward to present values). This is critical, because the annual change in capital stock is driven primarily by new purchases. If the amount of these purchases measured in current dollars were divided by net plant assets bought many years earlier and therefore valued in cheaper dollars, the percentage change in capital inputs would be significantly overstated. This, in turn, would lead to an understatement of capital productivity.

Output Measure—The Commission defines hospital output as the number of admissions, with adjustments for real case-mix change and outpatient activity.[7] The data used for the case-mix change adjustment are ProPAC estimates, incorporating across-DRG case-mix index change and within-DRG case-complexity change. The methods used in estimating real-case mix change are discussed in the next section of this appendix. The resulting measure of adjusted admissions per composite unit of labor, supply and service, and capital inputs (which the Commission calls aggregate total factor productivity) implicitly assumes that hospital services are inputs contributing to the production of the final output, a completed admission.

Intensity and Service-Level Productivity Measures—ProPAC examines aggregate productivity in more detail by separating it into two components. The first, which is referred to as service-level or intermediate productivity, provides information regarding the efficiency of hospitals in producing intermediate services (laboratory tests, surgeries, days of nursing care, and so forth) that go into a hospital admission. The second, case-mix constant intensity of services, examines changes in the number and type of services that hospitals produce per admission, after controlling for changes in the complexity of patients treated. An increase in the intensity of services may be the result of longer lengths of stay, greater use or wider application of existing technologies, or the adoption of expensive new technologies to provide service add-ons or substitute for less complex procedures.

For the service-level productivity and intensity of service measures, the relative value of the various service units hospitals produce was measured by their posted charges, with an adjustment to remove the effects of year-to-year price inflation. Hospital price increases are represented by the hospitals and related services component of the CPI. All other data used for the study, including the number of hospital admissions, FTEs, supply and service costs, charges, depreciation expenses, and assets, were obtained from the American Hospital Association (AHA) Annual Survey of Hospitals.

Limitations

ProPAC's productivity measurements are subject to certain limitations. The Commission has taken these into account in assessing the industry productivity trend and forming expectations for future productivity performance.

A significant problem is that it is impossible to account fully for quality changes in the hospital product. This problem is not unique to ProPAC's analysis, however. Virtually all productivity analyses suffer to some degree from the inability to measure quality differences.

There are two constraints on the accuracy of the labor input data: Full-time equivalents are estimated by counting all part-time employees as working half time, and the number of workers employed is reported on the last day of the hospital's fiscal year. This approach does not necessarily provide an accurate reflection of the person hours used throughout the year, although the measure tracks reasonably consistently from year to year.

The measurement of the average age of capital is approximate because it relies on the methods for computing depreciation used by individual hospitals, which are not always consistent. In addition, the process of inflating the value of capital to current price levels assumes a smooth trend in capital prices over time. The actual price changes, as represented by ProPAC's two indexes, have been reasonably stable but not a straight-line trend.

Measurement of changes in the use of inputs is affected by two cost elements placed incorrectly in the data. The first is contract labor, which is categorized as a service and supply item rather than as labor. The second is leased equipment, which is also carried in the service and supply category, rather than in capital. Although these misplacements may affect the trend in each of the three input categories, the measurement of total factor productivity is not affected.

In the past, ProPAC extrapolated real case-mix change estimates based on Medicare data to the entire population. The Commission no longer believes, however, that case mix is increasing equally for the over-65 and under-65 populations. In recent years, hospital admissions per capita have grown less rapidly for privately insured people than for Medicare beneficiaries. As the least complex cases are shifted to outpatient settings, the average complexity of the remaining patients rises. For this analysis, it was assumed that real case-mix change was 1.0 percent for Medicare patients and 1.5 percent for non-Medicare patients in 1993.[8] The weighted average of 1.3 percent was then used to adjust admissions for the entire population.

The accuracy of ProPAC's intermediate productivity and intensity of services measures depends on two factors. The first is how closely hospital charges reflect the costs of individual service units. Systematic differences in hospitals' service markups may create a bias, although the effect of this bias is minimized by the fact that the analysis addresses only the change in hospital output.

The second factor is how well the hospital component of the CPI reflects hospital price increases. The CPI is not an accurate measure of the prices actually paid to hospitals. However, it is appropriate for this analysis because it measures change in hospitals' posted prices, or charges, which are being used here to measure the relative value of services. In addition, the index uses a random selection technique to ensure representativeness across a broad array of hospital services, and the weights used for aggregating the price increases of individual service units are updated regularly.

Table A-6. Change in Hospital Aggregate Productivity and Its Components, 1984-1993 (In Percent)

Year	Service-Level Productivity[a]	Case-Mix Constant Intensity of Services	Aggregate Productivity[b]
1984	-1.9%	-2.6%	0.7%
1985	-3.3	-2.2	-1.1
1986	-1.5	2.4	-3.9
1987	0.0	2.5	-2.5
1988	1.1	1.6	-0.5
1989	-0.4	0.8	-1.2
1990	-0.4	0.0	-0.5
1991	-2.1	0.6	-2.7
1992	-1.3	1.7	-3.0
1993	-4.2	-1.9	-2.3

Note: Change in service-level productivity minus change in intensity of services equals change in aggregate productivity, although this relationship may not be exact due to rounding.

[a] Defined as service output per unit of labor, supply and service, and capital inputs.

[b] Defined as admissions per unit of labor, supply and service, and capital inputs, with admissions adjusted for real case-mix change and outpatient activity.

SOURCE: ProPAC analysis based on data from the American Hospital Association Annual Survey of Hospitals; the Department of Labor, Bureau of Labor Statistics; and other sources.

Results

The results of ProPAC's productivity analysis begin with the trend in hospital aggregate productivity. This is followed by the trends in the two components of overall productivity, case-mix constant intensity of services and service-level productivity, as well as changes in the three input components, labor, supplies and services, and capital. Finally, the productivity trends in the general economy and specific industry groups are presented to provide a broader context for analyzing changes in hospital productivity.

Hospital Productivity—Aggregate productivity has risen only once since ProPAC's measurement began in 1983 (see Table A-6). This was a 0.7 percent improvement in 1984, at least partially in response to the introduction of PPS. After significant productivity declines over the next three years, the 0.5 percent drop in both 1988 and 1990 suggested a trend of stabilizing productivity. However, the 1991 result—a decline of 2.7 percent—ended this trend, possibly reflecting the impact of the economic recession, and this was followed by an even steeper decrease of 3.0 percent in 1992. In 1993, hospitals were able to slow the decline in productivity to −2.3 percent, which suggests that the trend may be reversing again.

Data from the AHA National Hospital Panel Survey, a monthly survey of about 2,000 hospitals, suggest that aggregate productivity change in 1994 could be positive. As of October, the most recent month of survey data, the hospital work force was actually smaller than it was a year earlier. Hospitals also reduced other inputs in fiscal year 1994, as evidenced by a modest per case cost growth of about 2 percent, compared with 6 percent in 1993 and 8 to 9 percent in previous years.

Changes in the intensity of services per hospital admission have a marked impact on aggregate productivity. As part of the initial response to prospective payment, hospitals reduced their intensity of services significantly, leading to the one year of productivity improvement in 1984. Intensity rose dramatically after the first two years of PPS, however, by about 2.5 percent in both 1986 and 1987. For the next three years, the industry succeeded in steadily scaling back the size of intensity increases, which generally led to better productivity outcomes. In

1992, however, the opposite occurred. Hospitals intensified the service content of admissions by 1.7 percent, and this was a key factor in the worst aggregate productivity performance in six years.

In 1993, the trend in intensity of services once again took a sharp turn, declining by nearly 2 percent. Most of this reduction was linked to a 3 percent drop in average length of stay. Despite this substantial drop in intensity, however, aggregate productivity still fell by 2.3 percent because hospitals did not reduce inputs accordingly. This is indicated by the poorest service-level productivity change seen in the entire 10-year period of analysis (−4.2 percent). To better understand this phenomenon, it is helpful to examine changes in the inputs used to produce patient care services.

Hospital Inputs—Hospitals increased their number of employees by about 3 percent annually for several years through 1992 (see Table A-7). Although FTE growth moderated to 1.6 percent in 1993, the total increase in labor inputs was 2.4 percent because of a 0.8 percent rise in occupation mix. Among the key factors responsible for this unusually large growth in occupation mix were substitution of registered nurses for licensed practical nurses and a 16 percent increase in the number of salaried physicians. The latter was due primarily to a steep climb in the number of residents, but may also have been influenced by the rising number of hospital-physician joint ventures.[9] Another factor was a 10 percent expansion of administrative staff, which may have resulted more from responses to the changing health care environment, such as marketing for managed care contracts and developing networks, than from patient care demands.

Table A-7. Change in the Use of Hospital Inputs, 1984-1993 (In Percent)

Year	Labor[a]	Supply and Service[b]	Capital[c]
1984	-1.8%	1.8%	3.3%
1985	-0.5	3.1	0.4
1986	2.1	8.8	0.8
1987	2.9	5.5	-0.5
1988	2.8	5.4	-1.3
1989	3.0	4.6	0.2
1990	3.3	5.6	2.1
1991	3.5	9.5	4.6
1992	2.7	10.2	5.6
1993	2.4	7.3	5.1

[a] Measured as the change in occupation-mix adjusted full-time equivalent employees.

[b] Measured as the increase in supply and service costs adjusted for inflation in the prices of these items.

[c] Measured as the age-adjusted change in building and equipment assets, adjusted for inflation in the prices of building construction and hospital equipment.

SOURCE: ProPAC analysis based on data from the American Hospital Association Annual Survey of Hospitals and various price indexes.

Hospital supply and service inputs have grown even faster than labor in recent years, reaching 10.2 percent in 1992 before falling to 7.3 percent in 1993. Part of these increases may represent shifts from the labor category, when hospitals initiate new service contracts (such as hiring a food service firm to run the dietary department) or increase their use of contract labor (such as the services of temporary nursing agencies). The key factor, however, appears to be that more supplies and services were used per admission, thus driving down aggregate productivity.

Age-adjusted capital purchases increased by about 5 percent in both 1992 and 1993. These unusually large increases were caused partly by a rise in the average age of plant and equipment, while capital spending continued to grow. This implies that many of the purchases were for items that did not replace existing capital. Most likely, many of the new purchases were also related to changes in the health care market, such as purchasing physician practices, developing satellite clinics, or acquiring long-term care facilities.[10]

Aggregate productivity can also be seen as the end result of the effects of supply and service inputs and capital inputs on labor productivity (see Table A-8). In 1984, a significant gain in labor productivity was largely offset by negative supply and service and capital effects. This means the rise in use of these other inputs was greater than the increase in labor. Over the rest of the 10-year analysis period, the general pattern started with labor productivity change hovering within a percentage point of zero. This was coupled with a negative service and supply effect of 1 to 3 percentage points and a capital effect of less than a half percentage point in either direction. The capital effect was positive for five years ending in 1990, but fell below zero as capital purchases surged in recent years. Capital has such a small effect primarily because it

Table A-8. Change in Labor Productivity and the Effects of Supply and Service Inputs and Capital Inputs in Measuring Hospital Aggregate Productivity, 1984-1993 (In Percent)

		Effects of:		
Year	Labor Productivity[a]	Supply and Service Inputs[b]	Capital Inputs[c]	Aggregate Productivity
1984	2.7%	-1.6%	-0.4%	0.7%
1985	0.6	-1.6	-0.1	-1.1
1986	-1.0	-3.0	0.1	-3.9
1987	-1.6	-1.2	0.3	-2.5
1988	0.3	-1.2	0.4	-0.5
1989	-0.7	-0.7	0.2	-1.2
1990	0.5	-1.1	0.1	-0.5
1991	0.1	-2.8	-0.1	-2.7
1992	0.8	-3.5	-0.2	-3.0
1993	0.2	-2.3	-0.2	-2.3

Note: Changes in labor productivity plus the effects of supply and service inputs and capital inputs equal aggregate productivity, although this relationship may not be exact due to rounding.

[a] Measured as the change in real case-mix and outpatient adjusted admissions per occupational-mix adjusted full-time equivalent employee.

[b] The percentage point difference resulting from broadening the labor productivity measure to include supply and service inputs.

[c] The percentage point difference resulting from broadening the labor productivity measure to include capital inputs.

SOURCE: ProPAC analysis using data from the American Hospital Association Annual Survey of Hospitals.

accounts for only about 10 percent of total costs. Supplies and services have a greater effect because these inputs are responsible for nearly half of all costs.

Productivity in Other Industries—In the general economy, the annual growth in labor productivity was 0.5 percent from 1973 to 1980 (see Table A-9). This represents a sharp decline from the trend of the 1950s and 1960s, when output per unit of labor increased up to 4 percent a year. In the 1980s, the growth was modestly higher, at about 1 percent per year. It edged up even more in 1991 to 1.3 percent, followed by a peak of 3.0 percent in 1992—the year the economy pulled out of recession. Annual productivity growth returned to 1.5 percent in both 1993 and 1994, but this is still higher than the average for either of the past two decades.

Labor productivity has followed the same pattern in product-oriented and service-oriented industries as was observed for hospitals—a substantial reduction in 1991 from the level of the 1980s followed by a surge in 1992 (see Figure A-2). In all periods, however, the labor productivity growth of service-oriented industries was substantially less than that of product-oriented industries; the performance of the hospital industry was even worse. In the peak year of 1992, for example, the growth was 4.8 percent for the product-oriented group, 2.4 percent for the service-oriented group, and only 0.8 percent for hospitals. The Bureau of Labor Statistics has found that bringing capital and service and supply inputs into the measurement for these other industries reduces the level of produc-

Table A-9. Change in Labor Productivity in the General Economy, 1973-1994 (In Percent)

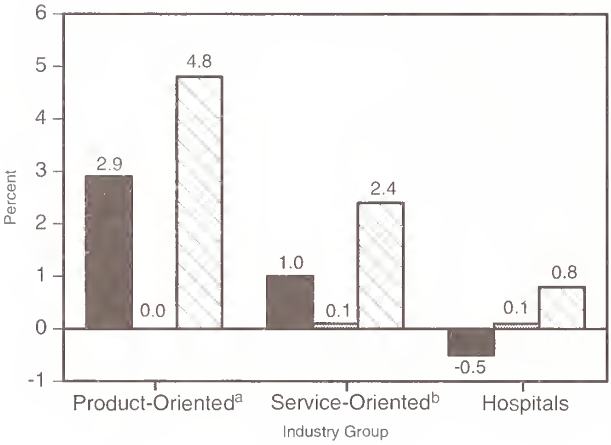
Year	Annual Change
1973-1980	0.5%
1980-1990	0.9
1991	1.3
1992	3.0
1993	1.5
1994*	1.5

Note: General economy refers to the business sector, which includes farms and private industry and excludes the Federal government, nonprofit institutions, and households.

* Annualized rate, based on seasonally adjusted data for the first three quarters.

SOURCE: ProPAC analysis of data from the Department of Labor, Bureau of Labor Statistics.

Figure A-2. Change in Labor Productivity, by Industry Group, 1980-1992 (In Percent)



[a] Includes 55 mining and maufacturing industries, weighted by employment.

[b] Includes 23 transportation, utility, retail trade, and service industries plus the Federal government, weighted by employment.

SOURCE: ProPAC analysis of data from the Department of Labor, Bureau of Labor Statistics for product-oriented and service-oriented industry groups; the American Hospital Association Annual Survey of Hospitals for the hospital industry; and other sources.

tivity measured for labor only. This parallels ProPAC's findings for the hospital industry.

Commission Decision

ProPAC believes hospitals should be expected to achieve at least modest productivity improvements each year, consistent with the incentives provided by PPS. Moreover, half the savings from the expected productivity gain should be used to offset the cost impact of technological advances and real case-mix change, with the other half retained by the industry.

The productivity growth trend of service-oriented industries heavily influenced the Commission's decision. ProPAC believes that service industries (which include hotels, commercial banks, and airlines, for example) represent a better standard of comparison for hospitals than other industries, because the factors of production are more similar.

As noted earlier, economywide labor productivity grew in 1993 by half the rate experienced in 1992. Applying this 50 percent reduction factor to the 1992 productivity growth of service-oriented industries yields an estimate of 1.2 percent growth for these industries in 1993. Bureau of Labor Statistics data available for a sample of industries suggest that aggregate productivity growth should be about half the labor productivity growth. This implies that the increase in aggregate productivity for service-oriented industries was about 0.6 percent in 1993. The Commission saw no compelling reason to believe that the hospital industry should be different from other service industries.

On the basis of these considerations, the Commission decided it is reasonable to expect hospitals to increase productivity by 0.6 percent in fiscal year 1996. Accordingly, the productivity adjustment was set at −0.3 percent, compared with the −0.7 percent recommended for fiscal year 1995. This factor offsets the Commission's scientific and technological advancement allowance for operating payments, set at 0.3 percent.

ADJUSTMENT FOR CASE-MIX CHANGE

The Medicare case-mix index is the average DRG weight for all cases paid under PPS. Because this weight determines the PPS payment for each case, an increase in the CMI results in an equal percentage increase in hospital payments. The CMI may rise because of a real change in case mix or because of upcoding. Real case-mix change is a variation in patient resource requirements caused by a change in the mix of patients or their treatment. Examples include changes in the average severity of illness of patients admitted to hospitals or in the types of services provided while they are inpatients. Upcoding is a change in medical record documentation or coding practices that results in assigning cases to higher-weighted DRGs without increasing patient resource requirements.

In the Commission's view, hospitals should be compensated for real case-mix change, but not for upcoding. ProPAC's update recommendation includes adjustments to reflect two components of real case-mix change. First is an adjustment for that portion of CMI change due to increases in resource requirements resulting from greater patient complexity across DRGs, or across-DRG case-mix change. Second is an adjustment to compensate hospitals for greater patient complexity that is not captured by the DRG assignment, or within-DRG case-complexity change.

For several years, the Commission has been working to develop better methods to measure the components of case-mix change so that the update factor can be appropriately adjusted. This has been difficult because it is not easy to distinguish real changes in patient mix from changes in coding. The task is further complicated because the study previously used to empirically estimate the effect of upcoding was discontinued in 1990 due to data limitations. Therefore, the case-mix change portion of the update recommendation is based largely on the analysis of past data, together with the Commission's judgment.

HCFA is developing a new database, which will provide more accurate data on the past and potential future effects of coding practice changes. This database will contain medical record information, gathered monthly, for a nationally representative sample of 2,500 Medicare discharges (30,000 discharges annually). It will permit estimating real case-mix change by comparing records recoded using a consistent set of standards from year to year. Data collection began in the fall of 1994; an estimate of real case-mix change between fiscal years 1995 and 1996 should be available in early 1997.

The Commission's case-mix change adjustment consists of three components, which together reflect the effects of real case-mix change while removing the effects of upcoding:

- An estimate of total CMI change in the year prior to the update (for example, an estimate for fiscal year 1995 will be used for the fiscal year 1996 update) is subtracted from the update factor to remove the effects of real case-mix change and upcoding.

- A positive adjustment is then made for the portion of the CMI increase that reflects real across-DRG case-mix change.

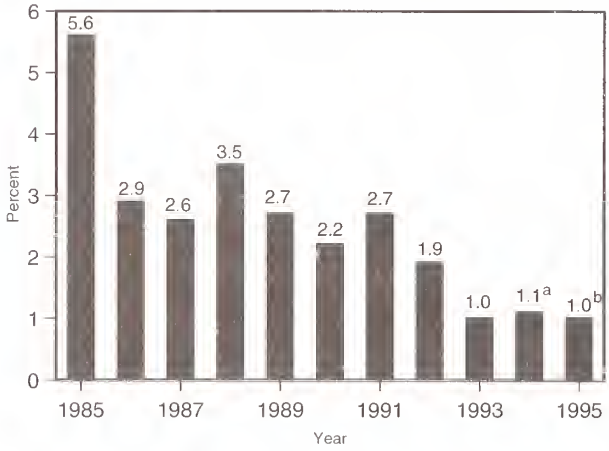
- Another positive adjustment is made for real case-mix change not captured by changes in the CMI—within-DRG case-complexity change.

Total DRG Case-Mix Index Change

Total CMI change was 5.6 percent in fiscal year 1985. Since then, it has declined annually, except for fiscal years 1988 and 1991 (see Figure A-3). In fiscal year 1988, the CMI increased 3.5 percent, compared with 2.6 percent in the previous year. This acceleration was largely due to two changes in the DRG Grouper (the rules for assigning cases to DRGs). Age was eliminated as a DRG classification criterion, and two heavily weighted DRGs were created that included mechanical ventilation and tracheostomy as classification criteria. These revisions gave hospitals incentives to further improve their medical record documentation and coding practices, resulting in a higher CMI.

Additional changes to the DRG Grouper, which provided more opportunities for upcoding, resulted in a 2.7 percent increase in the rate of CMI change in fiscal year 1991, compared with 2.2 percent in 1990. Despite further modifications to the Grouper, CMI

Figure A-3. Annual Medicare Case-Mix Index Change, 1985-1995 (In Percent)



[a] Estimate [b] Projection

SOURCE: ProPAC analysis of MedPAR and other data from the Health Care Financing Administration.

change continued to decline after 1991, growing by only 1.9 percent in 1992 and 1.0 percent in 1993.

In 1994, several minor changes were made to the DRG Grouper, among them revisions to the neonatal DRG assignments to better classify perinatal jaundice conditions. In addition, a new DRG for lung transplants was established. Using HCFA's preliminary data, ProPAC estimates that 1994's CMI will be about 1.1 percent higher than it was in 1993. This reflects a continuation of the downward trend in CMI change. Based on this information and the lack of any major changes in the Grouper for 1995, the Commission's estimate of total CMI change in fiscal year 1995 is 1.0 percent.

Real Across-DRG Case-Mix Change

For several years, ProPAC's estimates of real CMI change have reflected empirical evidence provided by a major study conducted in 1988 and 1989 by RAND. Sponsored by HCFA with support from ProPAC, this study involved reabstracting medical records and comparing the originally coded data with the recoded data. The methodology allowed for apportioning CMI change into real and upcoding components.

The analysis concluded that about two-thirds of the 2.4 percent increase in the CMI between fiscal years 1986 and 1987 could be attributed to real case-mix change. It also found that, from fiscal years 1987 to 1988, real case-mix change accounted for about half of the 3.0 percent CMI increase. Although the observed increases in the CMI were quite different in those two years, the estimates of real case-mix change were similar, 1.5 percent and 1.6 percent, respectively. The Commission's judgments in recent years have been consistent with RAND's findings. For fiscal year 1994, however, the Commission adjusted its estimate to reflect the lower rate of CMI growth. ProPAC's estimate for real across-DRG case-mix change was 0.7 percentage points. For fiscal year 1995, it is 0.8 percentage points.

Within-DRG Case-Complexity Change

Within-DRG case-complexity change may increase because patients with a given principal diagnosis are sicker when they enter the hospital or have more comorbidities. Except for this year, the Commission's estimates of within-DRG case-complexity change have been based on an analysis by SysteMetrics. This study was conducted using a database consisting of all Medicare discharges from a 10 percent stratified random sample of PPS hospitals in each year. Each discharge was then classified into a DRG, based on the principal disease, the stage of that disease (determined using SysteMetrics' Disease Staging system), and the number of unrelated comorbidities. Disease Staging is a clinically based measure of severity that uses objective medical criteria to assess severity based on the etiology and stage of disease progression. This approach permits measuring changes in the distribution of patients within DRGs and the effect on anticipated costliness.

The Commission believes that within-DRG case-complexity change has been decreasing over time for several reasons. DRG refinements are likely to have reduced the variation in patient complexity within DRGs. In addition, the shift of less complex cases to the outpatient setting has slowed, reducing increases in the complexity of hospitalized patients. However, SysteMetrics' estimate of within-DRG case-complexity change in 1991 was 0.7 percent, somewhat higher than in 1990. The estimate for 1992 was 1.0 percent. This increase may have been the result of increased sensitivity of these measures to upcoding, rather than real case-complexity change.

Given these technical difficulties and the apparent stabilization of case-mix change, the Commission decided not to repeat the within-DRG case-complexity study for the 1996 update. Instead, its estimate is based on its judgments applied to the previous trend. For fiscal year 1995, this estimate is 0.2 percentage points, the same as for fiscal year 1994.

CAPITAL UPDATE FRAMEWORK

In fiscal year 1992, Medicare began paying for hospital inpatient capital costs based on prospectively determined per case rates. Previously, Medicare had reimbursed hospitals based on their actual capital costs. During the 10-year transition to a single capital rate, payments will reflect both hospital-specific costs and a single Federal capital payment rate. Fiscal year 1996 will mark the midpoint of this transition.

As with payment for operating expenses, capital rates are updated annually. For the first five years of the transition, historical cost increases are being used to update the Federal and hospital-specific rates. Beginning in fiscal year 1996, the Secretary will use an update framework for such adjustments.

During the first five years, per case capital rates have been adjusted so that total payments equal 90 percent of estimated Medicare-allowed capital costs. This budget neutrality adjustment, rather than the cost-based update, has determined the increase in capital payments. In fiscal year 1996, the budget neutrality requirement will be lifted. Further, the cost-based updates will be replaced by an update framework, which will directly determine payment rate growth.

The Commission has reviewed alternative approaches to update capital payment rates. In its March 1993 *Report and Recommendations to the Congress*, it proposed a framework to adjust the Federal capital payment rate. The Secretary has not adopted this framework. Although in agreement on many points, the Commission and the Secretary disagree on the structure of the market basket that represents the prices of capital goods and related expenses, and the price proxies to be used. The following discussion provides an overview of the Medicare capital payment system and presents ProPAC's framework. It also compares the Commission's market basket with the one HCFA developed.

Medicare Capital Payment

During the transition, hospitals are paid according to either a fully prospective method or a "hold-harmless" method. The method used for each hospital depends on a comparison of the hospital-specific and Federal payment rates. A facility's hospital-specific payment rate is its updated 1989 Medicare-allowable inpatient capital cost per discharge. The Federal rate is the updated 1989 nationwide average Medicare cost per discharge. Hospitals with a 1992 hospital-specific rate below their Federal rate are paid under the fully prospective method; others are paid under the hold-harmless method. For each case, payment is adjusted for the relative costliness of the case (the DRG weight) and factors reflecting the hospital's location, teaching, and disproportionate share status.

The fully prospective method sets payments as a blend of the hospital-specific and Federal rates. In fiscal year 1996, payments to hospitals under this method will equal 50 percent of the hospital-specific rate and 50 percent of the Federal rate. Hospitals paid under the hold-harmless method have per case payments that equal the Federal rate or a blend of payments for old and new capital, whichever is greater. This blend is the sum of 85 percent of the hospital's old capital costs (100 percent for sole community hospitals) and a proportion of the Federal rate to account for new capital costs. Old capital costs are associated with assets purchased before the end of 1990 and put in use by September 30, 1994. All other capital costs are defined as those for new capital. Payment for new capital equals the Federal rate times the share of total hospital capital costs attributable to new capital. As a hospital's old capital depreciates, its new capital share increases, and its hold-harmless payment approaches and finally equals the Federal rate. At that point, the payment rate for the facility equals the Federal rate.

Update Framework

ProPAC's capital update framework includes a market basket component that measures the one-year change in a fixed mix of capital goods purchased by hospitals. As with the operating update, a forecast error correction factor adjusts payment rates so that the effects of past market basket forecast errors are not perpetuated. A financing policy adjustment is included to account for substantial changes in long-term interest rates. In addition, as with the operating update, there are adjustments for scientific and technological advances, productivity, and case-mix change. The following discussion explains the components of the Commission's capital update framework.

The Capital Market Basket—The Commission believes the capital update should reflect the change in the cost of capital purchases in the coming year. ProPAC's market basket thus adjusts for projected increases in the prices of capital assets purchased by hospitals. The market basket measures the one-year change in the price of a fixed mix of capital goods. It includes three components: buildings and fixed equipment, movable equipment, and other capital-related costs.

The Commission's market basket is intended to allow hospitals to accumulate, over time, adequate resources for future capital purchases. It is a measure of prices faced by hospitals as they acquire assets necessary to maintain an adequate capital stock, rather than annual spending related to existing capital. Facilities are then able to use Medicare capital payments to purchase new assets or to build reserves to finance future asset purchases.

In HCFA's market basket, by contrast, the update to capital prospective payments measures anticipated increases in annual expenses related to the existing capital stock. It is virtually unaffected by changes in prices hospitals will have to pay to purchase new assets in the coming year. Annual capital expenses are depreciation, interest, and other costs associated with the entire stock of capital. Much of this stock was purchased when Medicare reimbursed hospitals for their actual capital costs and thus reflects historical capital spending.

The Commission believes it is inappropriate to set updates to future capital payment rates based on the annual expenses associated with historical capital spending. Such updates should instead reflect the purchase price of new capital.

Choice of Price Proxies—Research conducted for the Commission examined the price proxies proposed by HCFA, as well as several alternatives. This research suggested that two indexes are superior to those used by HCFA. The Boeckh building cost index subindex for apartment and office building construction is a strong price measure for the types of buildings and fixed equipment hospitals purchase. The Marshall and Swift hospital equipment index is a measure of movable equipment prices specifically designed for hospitals. ProPAC uses price changes in these two indexes in its market basket. The Commission, like HCFA, uses the CPI for residential rent to measure price changes for other capital-related costs.

Price Proxy Weights—The three price proxies are weighted in the market basket to reflect their contribution to hospital capital costs. These weights represent the relative importance of annual purchases for the two types of capital (buildings and fixed equipment and movable equipment) and outlays for other relevant capital expenses (in the case of other capital-related costs). In the absence of accurate and current information on capital purchases needed to maintain an appropriate stock of capital in the coming year, the Commission uses shares of depreciation expense, adjusted for other capital-related costs, as weights. Based on 1987 data, the weights are 0.454 for buildings and fixed equipment, 0.514 for movable equipment, and 0.032 for other capital-related costs. ProPAC intends to continue research to identify more accurate measures of the appropriate mix of capital purchases.

Fiscal Year 1996 Capital Market Basket Forecast—As of January 1995, the projected increase in ProPAC's capital market basket for fiscal year 1996 is 4.1 percent. This compares with a forecast of 3.4 percent for 1995 in last year's recommendation (3.7 percent based on more recent data) and 2.8 percent for 1994. The Commission expressed concern that the projected increase in the capital market basket may be overstated, because the 1996 value is so much higher than historical rates. (See the discussion of the PPS Hospital Market Basket in this appendix.) It recommended the estimated 4.1 percent in light of the ability to correct for any forecast error in future updates.

Forecast Error Correction Factor—The Commission bases its forecast of increases in the capital market basket on the best data available at the time of its recommendations. Unforeseen economic developments may cause substantial discrepancies between the projected and actual increases in the capital market basket, leading to potentially significant underpayment or overpayment to hospitals. Inclusion of a forecast error correction in the update framework removes the effects of such errors from the capital payment base. After implementation of an update framework in 1996, a forecast error correction will be made in the fiscal year 1998 update, if needed.

Financing Policy Adjustment—In the Commission's view, it is not appropriate to include interest in the market basket. Updates oriented toward future capital outlays rather than current expenses should reflect anticipated purchase costs. Inclusion of interest could lead to volatility in updates, overcompensation of hospitals in some circumstances, and undue risk for facilities at other times. Increases in interest rates encourage hospitals to defer investment or substitute financing by equity in place of debt, while declines encourage facilities to refinance existing debt. Neither of these behavioral responses would be reflected in a market basket that included interest expenses.

ProPAC's capital update framework instead includes an explicit adjustment to the capital update factor for use in cases of significant changes in long-term interest rates. Extended periods of unusually high interest rates could present hospitals with the choice of postponing needed renovation projects or facing interest costs beyond the level that Medicare would support. The financing policy adjustment would increase the capital update in such circumstances to ensure that facilities could maintain capacity adequate for cost-effective care for Medicare beneficiaries. The financing policy adjustment could raise payment updates at times of prolonged high interest rates, when some hospitals might face disruptive financial effects. When interest rates decline, the adjustment could lower payment updates.

Each year, the Commission assesses probable future patterns of interest rates. If ProPAC judges that interest increases warrant special adjustment, it will set a financing policy adjustment between zero and the full amount of the change in costs. If the Commission anticipates unusual capital cost savings from declining interest rates, it may set a negative adjustment. This would lead to lower updates and less growth in Medicare spending. In this way, it would allow the Medicare program to share in some of the savings in capital costs from refinancing outstanding debt.

The Commission does not anticipate substantial and prolonged periods of high interest rates in the near future. Therefore, it is not necessary to adjust capital payments for interest rate change at this time.

Scientific and Technological Advances—Future hospital capital investments may include more costly, quality-enhancing medical technology. The Commission recognizes these costs through an allowance for scientific and technological advances in its capital update factor. This allowance is intended to support appropriate technology applications that improve the quality of care for Medicare beneficiaries.

For fiscal years 1987 through 1995, ProPAC conducted technology-specific reviews to identify emerging technologies that are likely to increase Medicare operating costs in the coming year. It conducted similar analyses of technologies likely to affect capital costs for its fiscal year 1994 and 1995 capital updates. This year, the Commission chose to identify and review changes since the completion of its last comprehensive technology-specific study. On the basis of this review, the Commission believes that, in the coming year, hospitals will be able to finance annual capital costs of new technologies through productivity improvements.

Productivity—The capital productivity adjustment is intended to provide a financial incentive to encourage continued improvement in hospital productivity. Each year, the Commission sets a capital productivity target it believes is reasonable for the coming year.

The productivity target is designed to encourage hospitals to use existing plant and equipment more efficiently and to purchase cost-decreasing technologies. Improvements in productivity can help hospitals maintain their technological position, as well as adapt their capital stock to a health care environment in which there is less demand for inpatient services. To aid in setting an appropriate target, ProPAC examined productivity in hospitals and related industries.

Its analyses led the Commission to conclude that, in the coming year, hospitals should apply savings from more efficient use of capital to offset the costs of scientific and technological advances.

Case-Mix Change—Medicare uses the same DRG definitions and relative weights for operating payments and capital payments. Increases in the Medicare case-mix index, which measures the average DRG weight for all cases paid under PPS, will lead to equal proportional increases in Medicare capital and operating payments. The Commission's adjustment to operating payment rates for case-mix change is thus the appropriate adjustment for capital payments as well. The Commission recommends a net adjustment of zero percentage points for case-mix change in fiscal year 1996.

FISCAL YEAR 1996 UPDATE FOR PAYMENTS TO DIALYSIS FACILITIES

Since 1983, dialysis facilities have been paid a prospectively set amount per dialysis treatment. This amount, called the composite rate, was developed in 1983 based on a sample of Medicare Cost Reports from 1977 through 1979. It represents the median cost per treatment, weighted for the proportions of patients that dialyzed in the facility and at home.

The base composite rates for independent and hospital-based facilities are $122 and $126, respectively. The labor-related portion of each facility's base rate is adjusted by its wage index. These indexes reflect the relative differences in labor prices across geographic areas. Unlike payments to PPS hospitals, the composite rate is not updated annually. Although minor changes were made in 1986 and 1991, current payments per treatment are essentially equal to those set in 1983.

The Omnibus Budget Reconciliation Act of 1990 requires ProPAC to recommend an annual update to the composite rate payments to dialysis facilities. In developing its recommendation for fiscal year 1996, the Commission considered two separate but related questions. First, how much should payments increase in 1996 based on the established update framework? Second, are the base payment amounts to which the update applies appropriate?

Update Framework

The Commission used a formula approach similar to that employed in the update recommendation for PPS hospitals to determine how much the composite rate should increase in the coming fiscal year. It included a market basket index to reflect input price changes, an allowance for the cost of scientific and technological advances, and a target for productivity improvement. Dialysis payments are not adjusted for case mix, so there is no need to account for case-mix change in the update.

Market Basket Index—The market basket index for dialysis facilities is intended to measure changes in the cost of producing a good or service due to changes in input prices. It is constructed by defining input components that reflect the full range of goods and services dialysis providers purchase. Each component has a weight that represents its cost share, or proportion of total expenses. Because data are not available on actual changes in individual prices, the price change for each component is measured by a proxy.

ProPAC's dialysis facility market basket comprises four input cost components: capital, labor, other direct costs, and overhead. Input cost shares were calculated using unaudited 1993 cost report data. The shares differed somewhat between hospital-based and independent facilities. However, these differences had no effect on the overall market basket forecast.

ProPAC used select price proxies from the Medicare PPS hospital, home health agency, and skilled nursing facility market baskets in the dialysis facility market basket. This analysis projects input prices to rise by 3.7 percent between fiscal years 1995 and 1996 for independent and hospital-based facilities.

Scientific and Technological Advances Allowance—ProPAC's scientific and technological advances allowance is intended to encourage dialysis facilities to adopt new technologies that improve the quality of patient care even though they increase costs. It represents the Commission's judgment about the level of financing required for these advances in the coming fiscal year. To arrive at an informed judgment on the appropriate amount of the allowance, ProPAC contracted with Abt Associates, Inc. to estimate the incremental impact new technology applications will have on the cost per dialysis treatment for fiscal year 1996.

The contractor initially developed a broad list of technologies that was narrowed to include only those that are considered to be safe and effective, are at least 5 percent but no more than 75 percent diffused among Medicare dialysis patients, and have a significant effect on Medicare costs. The contractor then estimated the technologies' future impact on the combined operating and capital cost per dialysis treatment based on the expected cost and use of the technologies. A panel of experts reviewed the technologies and cost estimates for accuracy and validity.

These estimates are subject to several limitations. First, they do not capture all relevant costs. For example, costs from widely diffused technological advances, the adoption of low-cost technologies, and subtle changes in practice patterns are not measured. Second, the estimates reflect only those technologies that are adopted systemwide. Finally, the estimates are based on projections of future costs and rates of adoption. Nonetheless, this technology-specific approach is useful for deriving more informed estimates of the costs of scientific and technological advances.

The final S&TA allowance included eight quality-enhancing, cost-increasing technologies (see Table A-10). The total estimated incremental impact of these technologies on the operating and capital costs of providing dialysis services for fiscal year 1996 is between $6.8 million and $54.2 million, with a best estimate of $26.2 million. The best estimate is about 0.6 percent of total projected composite rate payments for fiscal year 1996.

Productivity Improvement Adjustment—The productivity adjustment is intended to give dialysis facilities a financial incentive for continued improvement in productivity through the more efficient use of resources. It reflects the Commission's judgment regarding productivity gains that dialysis facilities can attain in the coming fiscal year.

In 1992, ProPAC sponsored a study of the historical trend in the cost of providing dialysis services. It examined changes in the mix and costs of inputs dialysis facilities use to produce hemodialysis and peritoneal dialysis treatments. The results of this study provided a basis for the productivity adjustment included in ProPAC's fiscal year 1994 update recommendation.

Between 1983 and 1987, the cost-decreasing effect of productivity improvements had a substantially larger impact on the cost per treatment than the cost-increasing effect of scientific and technological advances. Between 1987 and 1991, productivity improvements had a lesser impact on costs, yet continued to more than offset the costs of technological innovations. The study concluded, however, that the marked productivity gains observed in the dialysis industry over the last decade are unlikely to continue.

To supplement the results of the historical cost study, ProPAC examined trends in several productivity indicators found on the Medicare Cost Report (see Table A-11). These data show that labor productivity is higher in independent dialysis facilities than in hospital-based facilities. However, the differential is decreasing. Labor productivity for independent facilities appears to have reached a point of equilibrium beyond which further improvements are unlikely. For hospital-based facilities, labor productivity may be increasing.

By contrast, hospital-based dialysis facilities use capital more efficiently than independent facilities.

Table A-10. Estimated Impact of Cost-Increasing Technologies for Dialysis Facilities, Fiscal Year 1996 (In Millions)

	Estimated Amount		
Technology	Low	High	Best
Automated peritoneal dialysis cyclers	$ 0.9	$ 14.0	$ 5.2
Increased dialysate needs	0.5	11.4	3.6
Twinbag disconnect systems	0.7	6.6	2.8
High flux/biocompatible dialyzers	0.5	7.9	4.4
New generation dialysis machines	1.2	6.8	5.9
Automated reprocessing equipment	0.7	2.1	1.4
Computerized systems	2.1	4.5	2.4
Kinetic modeling	0.2	1.2	0.4
Total	6.8	54.2	26.2

Note: Columns may not sum to total due to rounding.

SOURCE: Abt Associates, Inc., under contract to ProPAC.

Table A-11. Productivity Indicators for Hospital-Based and Independent Dialysis Facilities, 1990-1993

Facility Type	Total Treatments Per Full-Time Equivalent	Staff Mix*	Hemodialysis Treatments Per Station	Length of Dialysis (In Hours)	Dialyzer Reuse
Hospital-based					
1990	548	0.67	597	4.5	–
1991	566	0.64	619	4.5	–
1992	564	0.64	618	4.5	–
1993	598	0.63	663	4.5	–
Independent					
1990	659	0.33	539	4.5	9.1
1991	625	0.35	555	4.5	10.0
1992	633	0.34	566	4.5	11.2
1993	617	0.35	563	4.5	12.0

Note: Years represent facility fiscal years.

* Staff mix = ratio of registered nurses to all direct patient care staff (registered and licensed practical nurses, nursing assistants, and technicians).

SOURCE: ProPAC analysis of Medicare Cost Report data from the Health Care Financing Administration.

Capital productivity increased for both facility types between 1990 and 1993. Although the median length of dialysis sessions was constant at 4.5 hours, many industry experts believe that dialysis treatment times are now increasing. Therefore, future cost savings from capital productivity improvements may be offset by longer dialysis sessions.

ProPAC considered a range of options in determining an appropriate productivity adjustment. Findings from the historical cost study indicate that modest short-term productivity gains can be expected. Current trends in costs and productivity indicators from the cost report generally support this conclusion. However, widespread concern about the adequacy of dialysis services suggests that further efforts to reduce costs may adversely affect quality of care. The Commission concluded that it is reasonable to expect dialysis facilities to achieve modest productivity gains in fiscal year 1996 that will offset the costs of scientific and technological advances.

Current Costs and Payments

To assess the appropriateness of the base composite rates, ProPAC compared the ratio of aggregate wage-adjusted composite rate payments to estimated aggregate Medicare outpatient dialysis costs for fiscal year 1995. Payment to cost ratios were calculated for hospital-based and independent dialysis facilities separately and combined. These ratios estimate the extent to which Medicare payments cover the costs of providing dialysis services to Medicare beneficiaries.

To estimate fiscal year 1995 aggregate Medicare costs, the 1993 unaudited cost report data were used to calculate total facility costs. Reported costs were reduced by HCFA's 1991 audit correction factors. Then, independent facilities' costs were adjusted to correct for an overhead allocation error that artificially reduces the cost per treatment. Finally, adjusted costs were inflated to 1995 dollars.

Audit Correction—HCFA's audit of a sample of 1991 dialysis facility cost reports found that Medicare costs for independent and hospital-based facilities were 12.2 percent and 4.6 percent below reported costs, respectively. Audited costs were lower for two reasons. Costs that were recorded or allocated improperly were corrected in the audit. Costs determined to be nonallowable under Medicare principles of reimbursement were removed. The entire audit differential for hospital-based facilities was due to the reallocation of improperly reported costs. The audit differential for independent facilities, however, was due to both the reallocation of costs and the removal of nonallowable costs.

The removal of nonallowable costs accounted for roughly 60 percent of the 12.2 percent audit differential for independent facilities. Four major cost items were represented. First, costs associated with services provided by related organizations are limited to the price that a facility would pay elsewhere. Second, for chain-member facilities, home office costs are allowable only to the extent they are associated with patient care and are treated as related organization costs. Third, capital depreciation expense is limited to the amount calculated according to the straight-line method. Finally, a facility's medical director's salary is limited to 25 percent of the reasonable compensation equivalent, or $22,950; compensation for a facility administrator is limited to $50,000, which must be pro-rated among facilities if the individual administers more than one facility.

Adjustments also were made to remove nonallowable management fees paid to facility owners and to offset interest expense with investment income. A ProPAC study of Medicare cost principles uncovered a number of other nonallowable cost items reflected in the audit adjustment factor. But these are likely to be minor contributors.

In general, ProPAC believes HCFA's audit adjustments were appropriate and in accordance with Medicare's reasonable cost concept. One concern, however, is that the salary limits, which were established in prior years, have not been updated and may not reflect current salaries. Therefore, the Commission considered a lower audit factor for independent facilities based on the 1991 audit data.

ProPAC calculated an alternative audit factor by adding back to total audited costs the portion of reported salaries that was removed in the audit. Then an adjusted audited cost per treatment was calculated and compared to the unaudited cost per treatment. This yielded a lower audit adjustment factor of 10.5 percent.

Overhead Allocation Adjustment—As part of the cost report's step-down process, a portion of independent facilities' indirect administrative and general costs is allocated to the drug recombinant human erythropoietin (EPO). Because EPO is not covered under the composite rate, its direct costs and overhead apportionment are removed from the cost calculation. Although this does not affect payments, the cost estimate is understated by the amount of allocated overhead costs. As part of the 1991 audit, HCFA estimated this effect to be about $3 per treatment. Therefore, the Commission increased the adjusted cost estimate for independent dialysis facilities by $3 per treatment.

Trending for Inflation—The last step in estimating 1995 costs was to inflate Medicare-allowable adjusted costs in 1993 to account for price changes through 1995. On the basis of ProPAC's dialysis facility market basket forecast, independent and hospital-based facilities' adjusted costs were increased by 5.72 percent and 5.53 percent, respectively.

Results—ProPAC's cost analysis indicates that, in aggregate, Medicare payments are essentially equal to estimated Medicare costs for fiscal year 1995. The ratio of Medicare payments to costs ranges from 0.98 to 1.00, depending on which independent facility audit adjustment factor is used. This varies by type of facility, however. The aggregate Medicare payment to cost ratio for independent dialysis facilities ranges from 1.11 to 1.13. By contrast, the aggregate Medicare payment to cost ratio for hospital-based facilities is 0.76.

Discretionary Adjustment

ProPAC's cost analysis indicates that, in aggregate, Medicare payments to independent dialysis facilities are 11 percent to 13 percent higher than their Medicare-allowable costs. Independent facilities make up the majority of providers and perform the majority of treatments. For hospital-based facilities, however, the composite rate is about 24 percent below Medicare costs per treatment. Interpreting the significance of this differential is difficult for several reasons.

First, the Commission is concerned about the reliability of the cost data. The true cost of providing dialysis treatments is unknown owing to data deficiencies and inconsistencies in reporting across facilities. Therefore, the underlying relationship between payments and costs is uncertain. ProPAC appreciates HCFA's continued efforts in compiling the unaudited cost report database and supports its actions to improve the quality of the cost data. These improvements, however, will not be apparent until the fiscal year 1994 cost reporting period.

Second, the cost per treatment in hospital-based facilities historically has been about 50 percent higher than in independent facilities. Other analyses have failed to attribute this difference to factors for which the payment system should compensate, such as patient mix and geographic location. Rather, the data show that the higher cost per treatment in hospital-based facilities is due, in part, to higher labor expenses and the method by which costs are allocated between inpatient and outpatient departments. Further, differences between independent and hospital-based facilities in the quality of care provided and in patient outcomes have not been demonstrated. Therefore, the significance of the difference in payment to cost ratios is unclear.

Despite these uncertainties, ProPAC believes it is necessary to modify its update recommendation with an adjustment to the base payment rates. The Commission recommends a negative discretionary adjustment of 3.7 percentage points. There is no basis to increase the composite rate for independent dialysis facilities, given that Medicare payments to these providers are higher than Medicare costs. Without information documenting legitimate reasons for hospital-based facilities' higher costs, the Commission cannot justify a differential update for these facilities, despite their low payment to cost ratio.

Notes to Appendix A

1. From 1985 through 1990, ProPAC's annual report was titled *Report and Recommendations to the Secretary, U.S. Department of Health and Human Services.* Beginning in 1991, the report's name was changed to *Report and Recommendations to the Congress.* From 1985 to 1987, the publication date was April 1. Since 1988, the date has been March 1.

2. Abt Associates, Inc., *The Incremental Impact of Scientific and Technological Advances on Operating Costs in PPS Hospitals and PPS-Excluded Facilities (FY 1995)*, ProPAC Extramural Technical Report No. E-94-02, January 1994.

3. Steven J. Lewis, *Trends in Cardiac Care: Contraction, Concentration, Collaboration,* AHA Hospital Technology Series (ISSN 0888-711X)(Chicago, IL: American Hospital Association, 1993).

4. T.J. Ryan and others, "Guidelines for Percutaneous Transluminal Coronary Angioplasty," *Circulation* 88(6):2987-3007, December 1993.

5. Kris Kyes, "PACS: Back to the Future," *Imaging Economics* 7(2):23, Fall 1994.

6. Prospective Payment Assessment Commission, *Hospital-Physician Relations: A National Survey of Hospital Chief Executive Officers and Chiefs of Medical Staffs*, ProPAC Intramural Technical Report No. I-95-02, March 1995.

7. Adjusted admissions is a measure of all patient care activity undertaken in a hospital, including acute inpatient admissions, hospital-based long-term care unit admissions, and outpatient visits. The measure is calculated by multiplying inpatient admissions by the ratio of total charges to inpatient charges.

8. The Commission's estimate of Medicare real case-mix growth has been declining gradually for several years, but then dropped precipitously from 1.5 percent to 1.0 percent in 1993. The non-Medicare estimate of 1.5 percent for 1993 reflects the assumption that case mix in the under-65 population continued to grow at the previous rate.

9. According to the American Medical Association, the total number of residents climbed by 8.9 percent in 1993 after annual increases averaging only 2.3 percent over the previous five years. This larger growth is linked to a substantial increase in the number of first-year graduates of foreign medical schools, as well as to a lengthening of the average residency period.

10. It is important to remember here that the data used in this analysis are not limited to acute inpatient services. Outpatient services and hospital-based long-term care units are also included.

Appendix B. Technical Report Series

Appendix B lists the Prospective Payment Assessment Commission's (ProPAC) extramural and intramural technical reports. These reports provide documentation related to the Commission's March and June annual reports to the Congress. The congressional reports are prepared upon request by the Congress. Each technical report is numbered according to type and year of publication. Numbers missing from the sequence refer to studies that have been replaced with more recent reports. Commission reports can be obtained from the Prospective Payment Assessment Commission, 300 7th Street, S.W., Suite 301B, Washington, D.C. 20024, or by calling the office at 202/401-8986.

EXTRAMURAL TECHNICAL REPORT SERIES

E-87-01: Improving the Definition of Hospital Labor Market Areas and Wage Indexes (Abt Associates, Inc.)

Methods for improving the definition of hospital labor market areas were investigated. This report identifies urban and rural labor market areas with the greatest amount of wage variation. It also examines the sources of wage variation within current labor markets and possible improvements in the area wage adjustment. Appended are step-by-step instructions for assigning hospitals within metropolitan statistical areas to urbanized areas as defined by the Bureau of the Census. (formerly E-87-12) (2/87)

E-87-03: Measures of Complexity of Illness Within DRGs (SysteMetrics/McGraw-Hill, Inc.)

The goal of this research was to refine the Commission's method of monitoring continuing changes in DRG case mix and case complexity (changes within DRGs). This study refines the Commission's methodology for estimating the annual component of real case-mix change within DRGs. The methodology was used to develop annual estimates of within-DRG case-mix change for Medicare patients from 1984 to 1986. It was also used by the Commission to estimate this component of real case-mix change in future years as additional Medicare data became available. Estimates from this study were used to analyze the indirect medical education adjustment. (3/89)

E-87-06: Assessing the Adequacy of the Medicare Cost Report Data (SysteMetrics/McGraw-Hill, Inc.)

This report provides information on perceived strengths and weaknesses of the Medicare Cost Report. Hospital financial officers, fiscal intermediaries, and industry representatives were surveyed. In general, the results of this study indicate that most hospitals believe that the cost report is acceptable as a reimbursement tool. Most hospitals thought, however, that the cost report does not accurately measure the cost of care for Medicare beneficiaries because bad debt, charity care, patient telephones, and so forth are not recognized. PPS has resulted in changes in reporting practices. Particular attention is given to passthrough items like capital and direct medical education. (4/88)

E-87-08: Trends in the Concentration of Six Surgical Procedures Under PPS and Their Implications for Patient Mortality and Medicare Cost (Project HOPE)

This report examines trends in hospitals' volumes of six specialized surgical procedures and the impact of those trends on mortality and costs. The six procedures are coronary artery bypass grafting, total hip replacement, abdominal aneurysm repair, intestinal resection, transurethral prostatectomy, and carotid endarterectomy. (6/88)

E-87-11: Small Isolated Rural Hospitals: Alternative Criteria for Identification in Comparison with Current Sole Community Hospitals (SysteMetrics/McGraw-Hill, Inc.)

This study determines how many facilities become eligible for sole community hospital (SCH) status. The contractor also examines how the distribution of SCHs would change if the SCH criteria were altered. This study also provides information used to analyze the financial vulnerability of small isolated rural hospitals. (6/88)

E-88-01: Subacute Care in Hospitals: Synthesis of Findings from the 1987 Survey of Hospitals Case Studies in Five States (Lewin/ICF)

This document is the final report of an 18-month study of subacute care in hospitals, often referred to as transitional care. Results of a representative national survey of hospitals are presented, along with findings from case studies in five states (California, Louisiana, New York, North Carolina, and Washington). Information is also presented on other types of transitional care, such as home health and skilled nursing care. (9/88)

E-88-02: An Analysis of Hospital Sensitivity to DRG Price Variation in the Medicare Prospective Payment System (SysteMetrics/McGraw-Hill, Inc.)

This study provides information on whether hospital behavior in rendering care and assigning resources is sensitive to differences between hospital costs and PPS prices. The contractor interviewed health care consultants and hospital administrators to identify the extent and objectives of hospital strategies to concentrate in or discontinue selected services. Second, the contractor assessed whether these strategies were in direct response to variations in the DRG prices or other factors influencing hospital management. Third, it examined the use of product line management and service costing in hospitals' responses to DRG price variations. (8/88)

E-89-01: Urban and Rural Cost Differences: Literature Synthesis and Review (SysteMetrics/McGraw-Hill, Inc.)

The reasons for differences in urban and rural hospitals' costs per case are synthesized from current research in this report. Specifically, the basis for the lower costs of rural hospitals compared with urban hospitals is explored, and further research suggested. (3/89)

E-89-02: Treatment of Certain Hospital Labor Expenses in the PPS Market Basket (SysteMetrics/McGraw-Hill, Inc.)

This report examines certain hospital labor expenses not directly measured by the PPS market basket (contract labor, employee bonuses, recruitment costs, employee benefits, overtime and part-time employment, and changes in employee skill mix). The project examines how these costs are currently measured in the market basket and changes in these expenses between 1985 and 1988. Estimates were made of the effect these labor expenses would have on market basket increases if the expenses were directly measured in the market basket wage component. The calculations of the Average Hourly Earnings for Non-Supervisory Hospital Workers and the Employment Cost Index for Hospitals are also described in the study. (2/89)

E-90-01: The Relationship Between Declining Use of Rural Hospitals and Access to Inpatient Services for Medicare Beneficiaries in Rural Areas (Codman Research Group, Inc.)

This study examines hospital utilization patterns for Medicare beneficiaries living in defined rural and urban hospital market areas of five states—Alabama, California, Illinois, Montana, and Texas—from 1984 to 1986. The study examines Medicare beneficiary care according to the market area where the beneficiary lives. Cases are divided into eight DRG groups to examine whether access is impaired for some services and not others. The study also examines how these changes in utilization affect admissions and market share of rural and urban hospitals. (1/90)

E-90-02: Alternative Hospital Market Area Definitions (SysteMetrics/McGraw-Hill, Inc.)

This report examines alternative methods for defining hospital market areas through an extensive literature search and contact with experts in the field. The study reviews the role market areas play in PPS. It also reviews numerous alternatives that have been used for defining market areas, exploring options that have not been used for hospitals. Finally, the study provides an evaluation of the alternative methodologies and their potential applicability to PPS for defining hospital labor and product markets. (3/90)

E-90-04: The Dynamics of Hospital Services Changing Patterns in the Services Provided by Hospitals from 1980 to 1987 (Kirsten Iversen)

The level of services and facilities provided by hospitals is dynamic, changing over time and across settings. This analysis describes patterns in the changing levels of services provided by different groups of hospitals from 1980 to 1987. (3/90)

E-90-05: Methodology for Measuring Case-Mix Change: How Much Change in the Case Mix Is DRG Creep? (The RAND Corporation)

ProPAC assisted the Health Care Financing Administration in a medical record reabstraction study. This study develops a method to distinguish case-mix increases caused by changes in coding practices from changes in treatment patterns and patient mix. It also provides information for developing and refining alternative ongoing data collection methods to monitor case-mix change overtime. The Commission helped fund this project and provided support in designing, implementing, and monitoring the study. (4/90)

E-90-07: How Services and Costs Vary by Day of Stay for Medicare Hospital Stays (The RAND Corporation)

This study describes how the cost of services provided during Medicare hospital stays varies throughout the stay. It also examines how patterns of daily costs vary with clinical characteristics, hospital characteristics, and the types of services provided. The study was based on data on the daily services billed to Medicare patients between May 1987 and April 1988 from a sample of 105 hospitals, and was the first time such data had been used in this way. (3/90)

E-90-08: Comparative Analysis of Annual Survey and Medicare Cost Report Margin Data (American Hospital Association)

This study presents the results of a comparative analysis of total hospital margin data derived from a matched sample of Medicare Cost Reports and corresponding American Hospital Association (AHA) annual surveys. Initially, the national average Medicare Cost Report margin was significantly higher than the corresponding annual survey margin. After editing, however, the cost report margin was found to be slightly lower than the AHA figure. A telephone survey was used to investigate the reasons for the cost report/AHA discrepancies. The study analyzes the discrepancies by type of hospital and categorizes the reasons they occur. The study concludes that properly edited cost report income statement data are usable in research applications. Only one source of bias was documented as significantly affecting calculation of average total margins by hospital group. This was the failure of some public hospitals to report government subsidies as revenue on their Medicare Cost Reports. (9/90)

E-90-09: Hospital Cost Variations Under PPS (Center for Health Policy Studies, Georgetown University)

This study explores the impact of PPS and other factors in accounting for variations in total costs among hospitals during the 1980s. The goal was to understand the extent to which PPS has affected hospital costs, and the mechanisms that have produced those effects. The impact of PPS was isolated by analyzing a time-series of cost data for a sample of hospitals, while controlling for the effects of other factors, such as input prices, mix of outputs, volume of outputs, local competition, and health insurance coverage. The study also focuses on the roles of staffing, service mix, patient volume, and financial pressure to identify the mechanisms that have operated to produce PPS effects. These analyses were conducted separately for all sample hospitals and for important subgroups of the hospital industry, including urban and rural hospitals. (9/90)

E-91-01: Classification Systems for PPS-Excluded and Non-PPS Providers (Project HOPE)

This study provides an overview and evaluation of systems that measure the case mix or resource complexity of patients treated in hospitals excluded from Medicare's PPS or patients treated by non-PPS providers. PPS-excluded hospitals include psychiatric and rehabilitation hospitals and distinct-part units as well as children's, long-term, and cancer hospitals. Non-PPS providers include home health agencies and skilled nursing facilities. The report identifies and describes available research on patient classification systems, case-mix measurement systems, and payment systems for each type of provider. Each system is evaluated using a set of criteria related to patient classification such as administrative feasibility, ability to explain variations in resource use, and clinical validity. Other criteria are applied to the evaluation of payment systems. Among the criteria used are administrative feasibility, equity of the system, and system effectiveness. (1/91)

E-91-02: Study of Health Care Access in Counties Where the Only Hospital Closed (Abt Associates, Inc.)

This report describes a study of access to health services in 22 rural counties where the only hospital closed between 1987 and 1989. These counties are compared with a similar group of counties that did not have a hospital between 1980 and 1989. Access to health care services is evaluated on two dimensions. First, distances and travel times (from the population center of each county) to the nearest hospitals in contiguous counties are identified, and second, the types and numbers of health care providers (facilities and practitioners) in each of the counties are noted. This was accomplished using telephone surveys of county health department personnel and analysis of the Area Resource File. (5/91)

E-91-03: Utilization of Inpatient Hospital Services by Rural Medicare Beneficiaries (Codman Research Group, Inc.)

This study updates a previous analysis (E-90-01) on inpatient hospital utilization for Medicare beneficiaries living in rural and urban market areas of five states: Alabama, California, Illinois, Montana, and Texas. The analysis expands on the earlier study by looking at utilization patterns for rural beneficiaries using refined DRG case-type groupings and by separately examining utilization patterns for younger and older Medicare beneficiaries. The findings from the analysis are consistent with the earlier study, in that access to inpatient hospital services does not appear too constrained for rural Medicare beneficiaries. The study, however, raised concerns about access to ambulatory care in these communities. (5/91)

E-91-04: Volume Adjustments Used in State Medicaid Programs and Rate Setting Systems (Abt Associates, Inc.)

This report presents information about volume adjustments used to adjust payments to hospitals by state Medicaid programs. The contractor surveyed states to determine the number that use a volume adjustment, how the adjustment is calculated, eligibility requirements, whether there are upper and lower thresholds for the adjustment, and the formula used to calculate the adjustment. The contractor also laid out a theoretical framework for considering volume adjustments, and outlined the relationships between policy goals and characteristics of these adjustments. (7/91)

E-91-05: Medicaid Payment Methodologies for Inpatient Hospital Services (Abt Associates, Inc.)

This report describes state Medicaid inpatient hospital payment methodologies in effect as of July 1, 1991. The information was collected through telephone interviews with knowledgeable staff at state Medicaid offices, rate setting commissions, and hospital associations. The survey attempted to identify, describe, and document key concepts used to develop Medicaid payment systems for inpatient hospital services. (8/91)

E-91-06: An Examination of Winners and Losers Under Medicare's Prospective Payment System: A Synthesis of the Literature (Lewin/ICF)

This report summarizes the academic and popular literature on (1) hospital characteristics affecting hospital financial performance under Medicare; (2) the design features that affect winning and losing, and how hospitals responded to the incentives of PPS; and (3) the environmental and community characteristics of a hospital's local market that affect hospital financial performance. In addition, it outlines some of the perceived gaps in the literature and includes an extensive bibliography. (10/91)

E-92-01: Certification Requirements for Nursing Homes (Abt Associates, Inc.)

This report presents descriptive information on current Medicaid certification and state licensure requirements for nursing homes. It focuses on those requirements that are expected to impose significant costs on facilities and result in cost variations across states. (3/92)

E-92-02: An Examination of Winners and Losers Under Medicare's Prospective Payment System: Final Report (Lewin/ICF)

This report summarizes the findings of a series of case studies conducted by Lewin/ICF examining why, controlling for similar hospital characteristics, some hospitals do well under PPS while others do not. Factors examined include hospital behavior, such as successful management strategies; hospitals' responses to PPS; and broader environmental factors that shape hospital performance. The degree to which performance is within a hospital's control is discussed. Individual hospital descriptions are not provided. Rather, the report integrates site visit findings and synthesizes the similarities and differences between successful and unsuccessful hospitals. (5/92)

E-92-03: Report on Quality Assurance in Non-PPS Settings (Abt Associates, Inc.)

This study describes mechanisms used to ensure and monitor quality in settings in which Medicare services are reimbursed. Among these are skilled nursing facilities, home health agencies, and hospitals not paid under PPS (psychiatric hospitals and rehabilitation hospitals). The study also looks at quality assurance in selected outpatient facilities, including ambulatory surgical centers, hospital outpatient departments, ambulatory care centers, cardiac catheterization laboratories, free-standing clinical laboratories, dialysis facilities, diagnostic imaging centers, lithotripsy centers, and comprehensive outpatient rehabilitation facilities. Quality assurance mechanisms including certification, accreditation and monitoring by Federal, state, and voluntary organizations are described. Quality indicators are classified by structure, process, or outcome. (8/92)

E-92-04: Within DRG Case Complexity Change in Fiscal Year 1990 (SysteMetrics/ McGraw-Hill, Inc.)

ProPAC annually recommends to the Congress an update factor for increasing the standardized payment amounts under PPS. This update factor reflects changes in the cost of providing services, including changes in the cost of hospital inputs; the effects of scientific and technological advances; productivity increases; and changes in the mix of patients that hospitals treat. The distribution of cases across DRGs is captured by the Medicare case-mix index, which directly affects the payment that hospitals receive for each case. This study measures the change in the distribution of cases by complexity level within DRGS. The study uses Medicare data for fiscal years 1988 through 1990 to develop estimates of within-DRG case complexity change and examines changes in coding of secondary diagnoses, both by overall and by hospital group. (4/92)

E-93-01: Identifying Changes in the Factors of Production for Dialysis Services (Project HOPE)

This report describes an historical cost study of the factors of production for outpatient hemodialysis and peritoneal dialysis services. The study examines how the use or cost of inputs changed between 1983 and 1991, and estimates the incremental or decremental impact that the change in each input has on the cost per dialysis treatment. The study focuses on the incremental effects of scientific and technological advances in the dialysis industry and ensuing productivity improvements. (3/93)

E-93-02: Within DRG Case Complexity Change, 1991 (SysteMetrics, Inc.)

This study measures the change in within-DRG case complexity from 1989 to 1990 and from 1990 to 1991. It also examines changes in the number of secondary diagnoses and complications and comorbidities from 1989 to 1991. This information is used for ProPAC's within-DRG case-complexity adjustment. The within-DRG case-complexity adjustment is designed to capture increases in patient complexity that are not measured by the DRGs. It is part of the case-mix adjustment in ProPAC's annual PPS operating and capital update recommendation to the Congress. The case-mix adjustment allows hospital payments to increase for real case-mix change, while removing payment increases that are due to changes in medical record documentation or coding practices. (2/93)

E-93-03: Exploring the Growth of Hospital Outpatient Surgeries (Abt Associates, Inc.)

This report identifies and assesses the principal factors that contributed to the growth observed between 1988 and 1990 in the use of five groups of procedures performed in the hospital outpatient department. The five groups selected were knee arthroscopy, YAG laser, lithotripsy, sigmoidoscopy and colonoscopy, and breast biopsies. These families of procedures were selected because as a group they represented varying levels of complexity, exemplified a variety of clinical problems, were in the top 50 most frequently performed ASC-approved procedures, and had a high growth rate between 1988-90. The factors affecting increased procedure volume were physician practice patterns and treatment approaches, technology requirements, the capacity of physicians and hospitals to perform the procedure, shifts in setting in which the procedure is performed, and reimbursement practices. (3/93)

E-93-04: Analysis of the Effect of the Economic Stabilization Program (Abt Associates, Inc.)

This report describes the effect of the economic stabilization program (1971–1974) on health care prices and expenditures. Previous studies of the program are reviewed and compared. Additionally, descriptive data on health care expenditures by type of service and program, health care prices, and hospital revenues and expenditures are displayed. (5/93)

E-93-05: State Regulations and Policies that Affect the Provision of Post-Acute Care (Abt Associates, Inc.)

This report presents descriptive information about state regulations and policies that affect the staffing requirements, services provided, and patient mix of Medicare-certified skilled nursing facilities and home health agencies. (5/93)

E-93-06: Development of Hospital Efficiency Measures (Jenifer Ehreth, Ph.D.)

This report evaluates several measures of how efficiently hospitals use their capital assets and compares asset efficiency and hospital financial performance across types of hospitals. Descriptive statistics and factor analysis are used to assess the reliability and validity of several measures over a three-year period. Three measures—the current ratio, the long-term debt to net fixed assets ratio, and an asset efficiency measure using data envelopment analysis techniques—are evaluated in more detail because they appear promising for analyzing the impact of payment policies on asset efficiency. (8/93)

E-94-01: Within DRG Case Complexity Change, 1992 (SysteMetrics, Inc.)

This study measures the change within-DRG case complexity from 1990 to 1991 and from 1991 to 1992. It also examines changes in the number of secondary diagnoses, complications and comorbidities from 1990 to 1992. ProPAC uses this information to estimate the annual amount of real case mix change within DRGs, which is not measured by the case mix index (CMI). Unlike previous studies of within-DRG case complexity change, this study investigates the long run trend for within-DRG case complexity change between 1985 and 1992, by hospital group. Potential explanations for the observed long run trend are discussed. (3/94)

E-94-02: The Incremental Impact of Scientific and Technological Advances on Operating Costs in PPS Hospitals and PPS-Excluded Facilities (FY 1995) (Abt Associates, Inc.)

This report provides supportive material for one component of ProPAC's update recommendations to the Congress: the allowance for scientific and technological advances (S&TA). It details the revised approach to estimating incremental costs attributable to technological change projected for fiscal year 1995. Two S&TA estimates were developed: one for changes in operating costs incurred by PPS hospitals and another for facilities excluded from PPS that are subject to the payment system established in the Tax Equity and Fiscal Responsibility Act of 1982. (1/94)

E-94-03: The Incremental Impact of Scientific and Technological Advances on Capital Costs in PPS Hospitals (FY 1995) (Abt Associates, Inc.)

This report provides supportive material for one component of ProPAC's PPS capital update recommendation to the Congress: the allowance for scientific and technological advances. It details the revised approach to estimating incremental capital costs attributable to technological change projected for fiscal year 1995. (1/94)

E-94-04: The Incremental Impact of Scientific and Technological Advances on Cost Increases in Dialysis Facilities (FY 1995) (Abt Associates, Inc.)

This report provides supportive material for one component of ProPAC's composite rate update recommendation to the Congress: the allowance for scientific and technological advances. It details the revised approach to estimating incremental costs attributable to technological change projected for fiscal year 1995. (1/94)

E-94-05: Discussion Report: Assessing the Impact of Cost-Decreasing Technological Change on Medicare Inpatient Costs (Abt Associates, Inc.)

To support its PPS payment update recommendations submitted to the Congress each year, ProPAC uses a technology-specific methodology to assess changes in the cost-increasing effects of emerging technologies. This report provides discussion of the feasibility of applying this methodology to an analysis of the financial impact of cost-decreasing technologies used in the care provided to Medicare beneficiaries in the inpatient setting. (7/94)

E-94-06: Discussion Report: Assessing the Cost Impact of Technological Change on Medicare and Non-Medicare Populations Across Settings (Abt Associates, Inc.)

To support its PPS payment update recommendations submitted to the Congress each year, ProPAC uses a technology-specific methodology to assess changes in the cost-increasing effects of emerging technologies. The methodology is specific to the technologies used in the care provided to Medicare beneficiaries in the inpatient setting. This report provides discussion of the feasibility of applying this methodology to an analysis that would consider changes in the cost of technologies used in the care of Medicare and non-Medicare beneficiaries across settings: in the inpatient setting as well as other sites of care, including nursing homes, outpatient departments, and home health agencies. (7/94)

E-94-07: Medicaid Reimbursement Methodologies and Payment Rates for Home Health Agencies (Abt Associates, Inc.)

This study presents survey results on state Medicaid programs' reimbursement methodologies and payment rates for home health care services. Information is presented in table format for each service (skilled nursing; physical, speech, and occupational therapies; medical social services; and home health aides). Each table includes information on the following items: payment rates; rate-setting methodologies; whether the rate is agency-specific, class-based, or flat; cost components that are treated separately in the payment process; and payment update factors. (1/94)

E-94-08: Quality-Oriented State Licensing Requirements for Non-PPS Facilities (Abt Associates, Inc.)

This two-volume study presents survey results on state licensing requirements for 15 long-term care, home health, and ambulatory care providers. Information is presented on state standards for organizational structure and administration, personnel, service provision, medical documentation, internal quality assurance processes, minimum access and transfer affiliations, equipment, and certificate of need. Licensure requirements that differ from Medicare certification are emphasized. (7/94)

E-95-01: A Comparison of Cost Definitions (Project HOPE)

This report provides a comparison of cost definitions between Medicare principles of reimbursement and generally accepted accounting principles. It documents cost items pertaining to acute care hospital services and outpatient dialysis services that are nonallowable in accordance with Medicare payment policy. In addition, the report discusses providers' contests of Medicare's determination of allowable costs, where applicable, and the results of those cases. (2/95)

Pending

Medicaid Managed Care Program Access Requirements (Project HOPE)

The report will examine seven states' strategies for ensuring access to health services for Medicaid eligible who are enrolled in managed care plans. It will summarize approaches states are using to ensure that enrollees receive medically appropriate services without facing geographic, cultural, and linguistic barriers to care. This information will help ProPAC develop recommendations on essential community providers. The report will present information gathered from both state Medicaid agencies and Medicaid managed care contractors. (4/95)

INTRAMURAL TECHNICAL REPORT SERIES

I-88-02: Recalibration Analysis Comparing Charge-Based and Cost-Based DRG Weights

ProPAC analyzed the two methods of recalibrating the DRG relative weights, using charges only (charge-based) and using charges that are adjusted by costs (cost-based). This report provides a detailed description of the data, methods, and results of ProPAC's comparisons. (3/88)

I-89-03: Review of Medicare Cost Report Data for Policy Analysis

This report summarizes the Commission's work on the use of the Medicare Cost Report data for decision making. The major activity the Commission initiated to identify improvements in the use of existing cost data for policy analysis was to convene a panel to discuss the strengths and weaknesses of the Medicare Cost Report. The report also summarizes ProPAC's monitoring of HCFA's three-year demonstration assessing the costs and benefits of adding to the cost report financial and utilization information regarding other payers. (3/89)

I-89-04: Payment Adjustments—Indirect Teaching and Disproportionate Share Hospitals

ProPAC analyzed the effect of teaching effort on Medicare costs. The objectives of the analysis were to estimate the relationship between teaching effort and Medicare cost per case using the most recent Medicare Cost Report data available. ProPAC also examined the overlap between the indirect medical education and the disproportionate share payment adjustments and evaluated the financial impact of revising the indirect medical education adjustment. The report describes the methods and results of the analysis. (7/89)

I-90-01: Medicare-Dependent Hospitals Under PPS

The Omnibus Budget Reconciliation Act of 1989 required the Commission to study the appropriateness of making a Medicare payment adjustment to hospitals that treat a high proportion of Medicare discharges. Information on this topic was also included in ProPAC's June 1990 report, *Medicare Prospective Payment and the American Health Care System.* (6/90)

I-90-02: Adjusting the Area Wage Index for Occupational Mix

Currently, the area wage index does not account for geographic differences in occupational mix. ProPAC studied the effect of adjusting the area wage index for occupational mix and the relationship of occupational mix to case mix. This report describes the methods and results of the analysis. The results include metropolitan statistical area, regional, and urban/rural estimates of the impact. The report also calculates how payments would be affected by adjusting the wage index for occupational mix. (8/90)

I-90-04: Financial Status of High Case Mix Hospitals

The Omnibus Budget Reconciliation Act of 1989 required the Commission to study the financial status of high case mix hospitals with special attention devoted to capital investment. Information on this topic was included in ProPAC's June 1990 report, *Medicare Prospective Payment and the American Health Care System.* (9/90)

I-91-01: Hospital Closures: 1985-1988

This report contains descriptive statistics on hospitals that closed between 1985 and 1988. Data are from the American Hospital Association Annual Survey of Hospitals, Medicare Cost Reports, and the Area Resource File. Rural and urban hospitals that closed are analyzed separately and compared with open rural and urban hospitals having fewer than 200 beds. (1/91)

I-91-02: The Role of Profitability and Community Characteristics in Hospital Closures, an Urban and Rural Analysis

This study investigates hospital closures that occurred from 1985 through 1988. The analysis focuses on the relationship between profitability and closure. Further, the analysis evaluates the impact on profitability of characteristics related to the hospital's mission and standing in the community. In addition, the analysis is extended by examining the factors that influence profitability and its components: revenue per case, cost per case, and total cases. This report provides a detailed description of the data, methods, and results of the study. (2/91)

I-91-03: Improving the Area Wage Index: The Area Wage Index and the Mix of Occupations Across Areas

Currently, the area wage index incorporates differences in the price of labor, as well as the mix of occupations across areas. This report presents the results of ProPAC's study on the effect of adjusting the area wage index for occupational mix. The results are presented separately for metropolitan statistical areas and rural areas. The study is based on Uniform Reporting System data collected from California hospitals. The report also describes the method used in California to collect data by occupational category. (7/91)

I-91-04: The Trend and Distribution of Hospital Uncompensated Care Costs, 1980-1989

This report presents the results of an analysis of uncompensated care costs for both PPS and PPS-excluded hospitals. Uncompensated care for this study is defined as the sum of charity care and bad debts, and uncompensated care costs are measured both with and without an offset for subsidies received from state and local governments. The study is based on data from the American Hospital Association Annual Survey of Hospitals over the period 1980 to 1989. Both the trend and distribution of uncompensated care costs are measured by hospital group. In addition, the relationship between uncompensated care costs and indirect medical education and disproportionate share payments under Medicare is examined. (10/91)

I-92-01: Winners and Losers Under PPS

Although the aggregate margin of hospitals under PPS has declined, some hospitals continue to perform well. In this report, ProPAC analyzes the characteristics of hospitals with consistently high and consistently low margins under PPS in 1986, 1987, and 1988. The characteristics are broken into three groups: payment adjustments, factors within the hospital's control, and factors outside of the hospital's control. The focus of the study is to determine the relative role of these factors in performance under PPS. This report provides a detailed description of the data, methods, and results of the study. (6/92)

I-92-02: The Effect of the OBRA 1989 Payment Provisions for Small Rural Medicare-Dependent Hospitals

In 1989 and 1990, ProPAC analyzed the financial status of hospitals with high Medicare shares. The ProPAC analysis, described in *Medicare-Dependent Hospitals Under PPS* (TRS I-90-01), indicated that the classification of hospitals into groups based on Medicare dependence is arbitrary and inconsistent over time. Further, although hospitals with high Medicare shares tend to perform more poorly under PPS, this poor performance appears to be related to characteristics other than Medicare share, notably low occupancy rates and long average lengths of stay. Based on these findings, the Commission recommended that no payment adjustment be made for Medicare-dependent hospitals. In the Omnibus Budget Reconciliation Act (OBRA) of 1989, Congress provided special treatment under PPS for small rural Medicare-dependent hospitals for three years (cost reporting periods beginning on or after April 1, 1990, and ending on or before March 31, 1993). This provision expired in 1993. However, the Congress extended it through fiscal year 1994. This report describes an analysis of the financial performance of small rural Medicare-dependent hospitals as defined in OBRA 1989 and the impact of the special provision on Medicare payment of these hospitals. (7/92)

I-93-01: The Accuracy of Cost Measures Derived from Medicare Cost Report Data

This report summarizes the findings and policy implications of a study conducted by the Center for Health Policy Studies. The primary objective of the study was to assess the accuracy of the hospital-level and DRG-level cost measures that can be constructed using Medicare Cost Report data. The first part of the study tested the impact of potential refinements in the Medicare Cost Report cost finding approach, such as using a standard cost center configuration or a multiple allocation technique. These types of changes were found to have relatively little impact. The second part compared values from advanced hospital cost accounting systems with values from the cost reports of the same hospitals. Substantial differences were documented for total Medicare costs, routine and ancillary costs, and average cost per case by DRG. (3/93)

I-95-01: The Relationship Between Hospital Costs and Payments by Source of Revenue, 1980-1991

This report presents an analysis of community hospital losses and gains by source of revenue, including Medicare, Medicaid, uncompensated care, private payers, and non-patient revenue. The data for the analysis are from the American Hospital Association Annual Survey of Hospitals. The report includes trend data on payments, costs, and charges. Data from 1991 are used to analyze the distribution of gains and losses for the different revenue sources, the relationship between these losses and hospital margins, and state-by-state differences. The report also compares the characteristics of hospitals that are and are not able to recover significant losses from uncompensated care, Medicaid, and Medicare through cost shifting. (3/95)

I-95-02: Hospital-Physician Relations: A National Survey of Hospital Chief Executive Officers and Chiefs of Medical Staffs

In an effort to identify factors that affect the financial performance of hospitals, ProPAC has undertaken a study of the financial effects of different organizational structures and mechanisms hospitals use to influence physician behavior. In the first phase of the project, ProPAC sponsored a national survey of hospital chief executive officers (CEOs) and chiefs of medical staff (CMSs) to evaluate the various aspects of hospital-physician relations. The survey explored the organization of hospital services; physician recruitment, retention, and evaluation; physician roles and responsibilities within hospitals; and hospital-physician financial arrangements. It also sought to ascertain how CEOs and CMSs perceived the respective roles played by and the influence of hospital management and physician staff within the hospital environment. The report will describe survey methods and results, including differences in approaches to hospital-physician relations employed by different types of hospitals. The next phase, a multivariate analysis, will link hospital financial data with data from the national survey. (3/95)

Pending

Indirect Medical Education Adjustment to PPS Payments

ProPAC will analyze the effect of teaching effort on Medicare costs. The objectives of the analysis are to estimate the relationship between teaching effort and Medicare cost per case using the most recent Medicare Cost Report data available. The study will also examine the overlap between the indirect medical education and the disproportionate share payments by revising the indirect medical education adjustment. The report will describe the methods and results of the analysis, and will build on analyses reported in ProPAC's *Payment Adjustments—Indirect Teaching and Disproportionate Share Hospitals* (TRS I-89-04). (4/95)

Hospital Costs and Payments by Revenue Source: The Impact of Medicaid Payment Increases in 1992

This report will supplement ProPAC's recent report on hospital losses and gains by source of revenue (TRS I-95-01). Like the first report, this one will analyze the trend in payments relative to costs by payer, as well as differences by type of hospital and by state. The focus throughout this report, however, will be the impact of substantial increases in revenue received by many hospitals in 1992 from Medicaid disproportionate share payments. This includes the impact on overall Medicaid payments and on the pattern of cost shifting to the private sector. (4/95)

A Review of ProPAC's Allowances for Scientific and Technological Advances

This report describes the study ProPAC conducted to support the Commission's decisions regarding the allowances for scientific and technological advances (S&TA) for the PPS operating and capital payment update recommendations for fiscal year 1996. The Commission used a qualitative approach to assess S&TA costs, evaluating more generally whether any changes in technology costs have altered the trend established in previous years. This report reviews previous allowances, the technologies assessed, advances that may affect Medicare costs, and, finally, the Commission's decisions for the two PPS S&TA allowances for fiscal year 1996. It also discusses how ProPAC's technology-specific methodology differs from other approaches to technology costing, and evaluates how well the methodology captures the information intended by the S&TA allowance. (4/95)

Outlier Payment Policy

This report will describe the results of recent analyses of the distribution of outlier cases and payments across DRGs and hospital groups and over time. The objectives and basic elements of outlier payment policy are reviewed, along with data from previous analyses by ProPAC, HCFA, and others. Major issues that have been discussed in the context of recent and proposed future changes in outlier payment policy are also described. In addition, the report describes and discusses the Commission's recommendations on outler policy changes in recent years. (6/95)

Transfer Payment Policy

This report will present the results of an analysis of Medicare's payment for transfer cases. Currently, the transferring hospital is paid a uniform per diem payment up to the full DRG amount. The receiving hospital is paid the full DRG payment if it is the final discharging hospital. The analysis examines the relationship between payments and costs for these cases. In addition, it examines the characteristics of hospitals and cases involved in a transfer sequence. The study also includes information on trends in transfer rates since 1984. (6/95)

Improving the Area Wage Index: Alternative Definitions of Hospital-Specific Labor Market Areas.

In response to requests from the House Ways and Means Committee and the Senate Committee on Finance, ProPAC has been studying alternative methods for defining hospital-specific labor market areas based on hospital geographic proximity. This project will develop and evaluate alternative labor market areas that could be used to improve the accuracy of the hospital area wage index under PPS. The report will describe the methods and findings from the Commission's study. It will include results from a series of analyses designed to shed light on the characteristics and performance of the alternative definitions. In addition, the report will include estimates of the impact of adopting alternative wage indexes based on these labor market area definitions. (8/95)

Medicare Per Capita Expenditures and Costs

This report will present a descriptive analysis of the variation in 1991 per capita expenditures for elderly beneficiaries by state and between the rural and urban areas of each state. Four per capita measures are being developed: (1) Medicare spending, (2) Medicare payments standardized to the national level (which will isolate geographic differences in utilization), (3) the provider production costs associated with Medicare spending, and (4) production costs adjusted for geographic price differences. All four of these measures will be broken down by setting, with physician services attributed to the setting in which they were provided. Geographic comparison will also be enhanced in the second and fourth measures by controlling for age and sex differences and by adding an estimated value for care provided to the elderly in military and Department of Veterans Affairs hospitals. (10/95)

Managed Care Issues

Managed care has become increasingly important in the American health care delivery system. This report will summarize the Commission's analysis of issues related to managed care and their relevance to the Medicare program. (10/95)

CONGRESSIONALLY MANDATED REPORTS

C-88-01: An Evaluation of the Department of HHS Report to Congress on Studies of Urban-Rural and Related Geographical Adjustments in the Medicare PPS

The Omnibus Budget Reconciliation Act of 1987 required ProPAC to report to the Congress on its evaluation of the Secretary's study on the feasibility and impact of eliminating or phasing out separate urban and rural payment rates. The report is organized into four major sections: background and definition of issues, summary of the Secretary's study methods and findings, ProPAC's evaluation of the Secretary's study, and future direction of Commission activities. (6/88)

C-88-02: Linking Medicare Capital Payments to Hospital Occupancy Rates

The Omnibus Budget Reconciliation Act of 1987 required ProPAC to report to the Congress on the suitability and feasibility of linking Medicare capital payments to hospital occupancy rates. This was addressed by reviewing current Medicare capital payment principles, examining historical trends in capital costs and occupancy rates, and analyzing the relationship between capital costs and occupancy. (4/88)

C-88-03: Outlier Payment Alternatives for Burn Cases

The Omnibus Budget Reconciliation Act of 1987 required ProPAC to study alternative payment methods for burn outlier cases under the prospective payment system. In this report, the Commission examines costs and PPS payments for all burn cases, as well as those for outlier cases only. Differences between payments and costs for burn hospitals and units and other PPS hospitals are examined. (7/88)

C-88-04: The Views of the Prospective Payment Assessment Commission on Developing Medicare Payment for Hospital Outpatient Surgery

The Omnibus Budget Reconciliation Act of 1987 required the Secretary of Health and Human Services to solicit ProPAC's views in developing outpatient payment systems and to include these views in a series of reports to Congress. This report focuses on the facility component of payment for surgeries performed in hospital outpatient settings. (8/88)

C-88-05: Separate PPS Payment Rates for Hospitals in Large Urban Areas and Other Urban Areas

The Omnibus Budget Reconciliation Act of 1987 required ProPAC to "evaluate the desirability of maintaining separate DRG prospective payment rates for hospitals located in large urban areas...and in other urban areas." The report first describes how PPS currently treats hospitals in different sized urban areas. Descriptive information comparing hospitals in these areas is then presented. This is followed by a discussion of the PPS policy implication of variation in costs and margins by metropolitan statistical area size. (12/88)

C-89-01: Medicare Payment for Hospital Outpatient Surgery: The Views of the Prospective Payment Assessment Commission

The Omnibus Budget Reconciliation Act of 1987 required the Secretary of Health and Human Services to solicit the Commission's views on prospective payment for hospital outpatient surgery. This report contains ProPAC's recommendations and related rationale on such payment policy beginning in fiscal year 1990. It also presents background information used by the Commission in its deliberations, including the findings of ProPAC's analysis of hospital outpatient surgery costs. (4/89)

C-89-02: Payment Rates for Hospitals Redesignated from Rural to Urban: Analysis and Recommendations

The Technical and Miscellaneous Revenue Act of 1988 required ProPAC to study and report to Congress on the appropriate PPS payment for hospitals redesignated as urban in the Omnibus Budget Reconciliation Act of 1987. This study evaluates the payment policy and the treatment of wage and wage-related costs in computing area hospital wage indexes. The financial impact of various policy options on both the redesignated hospitals and on other hospitals located in the affected urban and rural areas is also assessed. (8/89)

C-89-03: Adjustment to the Non-Labor-Related Portion of the Standardized Amounts

The Omnibus Budget Reconciliation Act of 1987 required ProPAC to analyze the feasibility and appropriateness of a geographic adjustment to the non-labor-related portion of the PPS standardized amounts. Price data for non-labor components of the hospital market basket are compiled from available data sources to determine whether non-labor prices vary by geographic area. The report contains this information and the Commission's determination of whether such an adjustment is feasible and appropriate. (8/89)

C-89-04: Adequacy of PPS Payment for Medicare Beneficiaries with Hemophilia

The House Ways and Means Committee asked ProPAC to assess the adequacy of PPS payment for Medicare inpatients with hemophilia. This report studies the population size, trends in the price of the clotting factor, and the financial impact on hospitals for treating these patients. (10/89)

C-90-01: Medicare Payments to Rural Sole Community Hospitals and Small Rural Hospitals

The Omnibus Budget Reconciliation Act of 1989 required the Commission to submit a report to Congress on the feasibility and desirability of using a cost-based reimbursement system for paying small rural hospitals and sole community hospitals. Further, ProPAC was to assess the impact of using alternative market share definitions to determine eligibility for sole community hospital classification, and of accounting for decreases in admissions in determining payments to small rural hospitals or their costs. This report summarizes the Commission's findings. (5/90)

C-90-02: Hospital Outpatient Services Background Report

The Omnibus Budget Reconciliation Act of 1989 required the Commission to submit a report to Congress on several issues related to outpatient payments. This report examines the growth in hospital outpatient services and the revenues generated by outpatient visits. The costs of providing services in hospital outpatient departments are compared to those associated with free-standing centers. Last, outpatient quality assurance and peer review are discussed. (7/90)

Medicare-Dependent Hospitals

The Omnibus Budget Reconciliation Act of 1989 required the Commission to study the appropriateness of making an adjustment to Medicare payments to hospitals that treat a high proportion of Medicare discharges. Information on this topic was included in ProPAC's June 1990 report, *Medicare Prospective Payment and the American Health Care System.* (6/90)

Financial Status of High Case Mix Hospitals

The Omnibus Budget Reconciliation Act of 1989 required the Commission to study the financial status of high case mix hospitals with special attention devoted to capital investment. Information on this topic was included in ProPAC's June 1990 report, *Medicare Prospective Payment and the American Health Care System.* (6/90)

Area Wage Index

The Omnibus Budget Reconciliation Act of 1990 required ProPAC to examine available data from states and other sources measuring earnings and paid hours of employment of hospital workers by occupational category. The impact of variation in occupational mix on the computation of the area wage index is included. Information on this topic was included in ProPAC's March 1991 *Report and Recommendations to the Congress.* (3/91)

Nurse Practitioners and Other Non-Physician Providers

The Senate Committee on Appropriations asked that ProPAC study the use of nurse practitioners and other non-physician providers in settings other than acute care facilities and long-term care institutions. Information on this topic was included in ProPAC's June 1991 report, *Medicare and the American Health Care System.* (6/91)

C-91-01: Medicare's Capital Payment Policy

This report summarizes the Commission's analyses of hospital capital costs and views on Medicare's capital payment policy. ProPAC's objectives for evaluating capital payment, along with supporting data and opinions, are presented. The Commission also comments on the Secretary of Health and Human Services' prospective payment proposal. (5/91)

C-91-02: Medicaid Hospital Payment

The Omnibus Budget Reconciliation Act of 1990 required the Commission to conduct a study of Medicaid hospital payment rates. The study examines the relationship between Medicaid and Medicare payments, and the financial condition of the hospitals receiving Medicaid payments. Special attention is given to hospitals in urban areas that treat large numbers of people eligible for Medicaid and other low-income persons. (10/91)

C-91-03: Rural Hospitals Under Medicare's Prospective Payment System

The Senate Committee on Appropriations requested a report examining the changes made in rural hospital payment policies and their fiscal impacts. The report includes an analysis of the impact of 1991 payment rules on 1984 and 1989 hospital margins and assesses the relative importance of individual policy changes. In addition, ProPAC was asked to study the effect of low volume on overhead costs and payments. The report includes a discussion of the relationship between volume and financial performance, and case mix and performance. The adequacy of national DRG weights for rural hospitals and differences between sole community and other small rural hospitals' characteristics and financial condition are also discussed. Finally, the report includes a profile of services offered by rural hospitals. (10/91)

C-91-04: Passthrough Payments for Hemophilia Inpatients

The Omnibus Budget Reconciliation Act of 1989 required the Commission to submit a report to Congress that contains recommendations on paying for the cost of administering blood clotting factors to inpatients with hemophilia. This report summarizes the Commission's findings. (6/91)

C-92-01: Prospective Payment System for Medicare's Skilled Nursing Facility Payment Reform

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which skilled nursing facilities receive payment for extended care services under Medicare Part A or a proposal to replace this system with a prospective payment system. The

Commission is required to submit an analysis of and comments on the proposal. This background report describes the Medicare SNF benefit, payment method, and beneficiary utilization. A cost function analysis provides information on variations in costs across facilities. Federal and state regulations affecting facility costs and use of the benefit also are discussed. This report concludes with recommendations concerning the need for a nursing facility wage index and case-mix adjustment in Medicare's payment policy. When the Secretary's report is released, the Commission will submit comments to the Senate Committee on Finance and the House Committee on Ways and Means. (3/92)

C-92-02: Medicare Payment for Hospital Outpatient Services: The Views of the Prospective Payment Assessment Commission

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a model system for Medicare payment for hospital outpatient services. The Commission is required to submit an analysis of and comments on the proposal. This background report describes Medicare's outpatient payment policies, which may vary by site of care and type of service. Ambulatory surgery and radiology are used to discuss problems with the current payment policy. The report concludes with nine recommendations for outpatient payment policy reform. When the Secretary's report is released, the Commission will submit its comments. (3/92)

C-92-03: Optional Hospital Payment Rates for Private Payers Based on Medicare's Methods (As specified in H.R. 3626)

This report addresses the development and impact of a system of Medicare-based rates for optional use by private insurers to control the growth in their payments to hospitals. The first part of the report discusses the design decisions that would need to be made, the steps necessary for orderly implementation of the system, and the administrative processes for ongoing operation of the system. The second part presents data on cost shifting in the hospital industry, and then uses these and other data to estimate the savings that would result from using optional rates under several different sets of assumptions. It also includes a discussion of the effects of optional rates on hospitals, private and government insurers, other providers, and patients. (3/92)

C-92-04: End-Stage Renal Disease Payment Policy

The Omnibus Budget Reconciliation Act of 1990 required the Commission to conduct a study to determine the costs, services, and profits associated with various modalities of dialysis treatments provided to end-stage renal disease patients. This study is the basis for recommendations regarding the method and level of payments for the facility component of dialysis services beginning in fiscal year 1993. The methodology to be used to update payment for subsequent fiscal years is included. As part of its annual March report, starting with fiscal year 1993, ProPAC is required to report its recommendations to Congress on an appropriate payment update factor. (6/92)

C-92-05: Interim Report on Payment Reform for PPS-Excluded Facilities

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which PPS-excluded hospitals receive payment for the operation and capital-related costs of inpatient hospital services under Part A of the Medicare program. Alternatively, the Secretary could propose a system with payments made on the basis of nationally determined average standardized amounts. Although the Secretary has not submitted her proposal, the Commission prepared this background report. When the Secretary's report is released, the Commission will analyze it and submit comments to the Senate Committee on Finance and the House Committees on Ways and Means, and Energy and Commerce. (10/92)

C-93-01: Global Budgeting: Design and Implementation Issues

In response to a request from the House Committee on Ways and Means, Subcommittee on Health, the Commission examined the implementation of a global budgeting system. ProPAC focused on the system's application to hospitals and other institutional health care services. The report addresses issues involved in the allocation of a national budget among types of health care services, the availability of data to support the system, and the mechanisms for ensuring that budget targets are met. (7/93)

C-94-01: Analysis of Medicaid Disproportionate Share Payment Adjustments

The Medicaid Voluntary Contribution and Provider-Specific Tax Amendments of 1991 (P.L. 102-234) required ProPAC to conduct a study of Medicaid disproportionate share payment adjustments. This study examines the feasibility and desirability of establishing maximum and minimum payment adjustments for hospitals deemed disproportionate share hospitals. It also assesses criteria (other than existing ones) that are appropriate for designating disproportionate share hospitals under Section 1923 of the Social Security Act. The report was submitted to the Senate Committee on Finance and the House Committee on Energy and Commerce. (1/94)

C-94-02: Interim Analysis of Payment Reform for Home Health Services

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which Medicare pays for home health services or a proposal to replace such system with a prospective payment system. The Commission is required to submit an analysis of and comments on the proposal to the Senate Committee on Finance and the House Committee on Ways and Means. This background report describes Medicare's home health benefit, payment method, use, and agency costs and payments. Federal and state regulations affecting access and quality of care also are discussed. When the Secretary's report is released, the Commission will submit comments to the Senate Committee on Finance and the House Committee on Ways and Means. (3/94)

Pending

Analysis of the Secretary's Proposal for Skilled Nursing Facility Payment Reform

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which skilled nursing facilities receive payment for extended care services under Medicare Part A or a proposal to replace this system with a prospective payment system. The Commission is required to submit an analysis of and comments on the proposal to the Senate Committee on Finance and the House Committees on Ways and Means, and Energy and Commerce. (This report will be issued after the Secretary's proposal becomes available.)

Analysis of the Secretary's Proposal for Medicare Payment for Hospital Outpatient Services

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop, by September 1, 1991, a model system for Medicare payment for hospital outpatient services. The Commission is required to submit an analysis of and comments on the proposal to the Senate Committee on Finance and the House Committees on Ways and Means, and Energy and Commerce. (This report will be issued after the Secretary's proposal becomes available.)

Analysis of the Secretary's Proposal for Payment Reform for PPS-Excluded Facilities

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which PPS-excluded hospitals receive payment for the operation and capital-related costs of inpatient hospital services under Part A of the Medicare program. Alternatively, the Secretary could propose a system with payments made on the basis of nationally determined average standardized amounts. The Commission is required to submit an analysis of and comments on the Secretary's proposal to the Senate Committee on Finance and the House Committees on Ways and Means, and Energy and Commerce. (This report will be issued after the Secretary's proposal becomes available.)

Analysis of the Secretary's Proposal for Home Health Service Payment Reform

The Omnibus Budget Reconciliation Act of 1990 required the Secretary of Health and Human Services to develop a proposal to modify the current system under which Medicare pays for home health services or a proposal to replace such system with a prospective payment system. The Commission is required to submit an analysis of and comments on the proposal to the Senate Committee on Finance and the House Committee on Ways and Means. (This report will be issued after the Secretary's proposal becomes available.)

Analysis of the Secretary's Legislative Proposal Eliminating Separate Average Standardized Amounts

The Omnibus Budget Reconciliation Act of 1989 required the Secretary of Health and Human Services to prepare a legislative proposal eliminating separate average standardized amounts for hospitals located in large urban, other urban, and rural areas. It also directed ProPAC to submit a report to Congress analyzing this proposal and its impact on hospitals. (This report will be issued after the Secretary's proposal becomes available. It should be noted that in OBRA 1990, Congress mandated the elimination of the separate rural standardized payment amount by fiscal year 1995.)

Appendix C. Biographical Sketches of Commissioners

Stuart H. Altman, Chairman

Stuart H. Altman is the Sol C. Chaikin Professor of National Health Policy at the Florence Heller Graduate School of Social Policy at Brandeis University. An economist whose research interests are primarily in the area of Federal health policy, he has been at Brandeis since 1977. Between 1971 and 1976, Professor Altman was deputy assistant secretary for planning and evaluation/health at the Department of Health, Education, and Welfare (now the Department of Health and Human Services). From 1973 to 1974, he also served as the deputy director for health of the President's Cost of Living Council, where he was responsible for developing the council's program on health care cost containment. Professor Altman is a member of the Institute of Medicine of the National Academy of Sciences and a former member of its governing council, and serves on the board of Beth Israel Hospital (Boston). He is a past president of the Association for Health Services Research and a former board member of The Robert Wood Johnson Clinical Scholars Program. He has testified before the Congress on a wide range of health policy issues and has written an array of articles in the field. Professor Altman received a B.B.A. from the City College of New York, and both an M.A. and a Ph.D. in economics from the University of California, Los Angeles.

Susan S. Bailis

Susan S. Bailis is executive vice president and chief operating officer of The A•D•S Group, which specializes in long-term care and senior living. From 1983 to 1985, Ms. Bailis was associate director of New England Medical Center, where she managed the hospital's entry into the long-term care field. Earlier, she was director of social service at the medical center. Ms. Bailis has held a number of academic appointments, most recently as assistant professor of psychiatry at Tufts University School of Medicine. She serves on the boards of several hospitals and has held leadership positions in many local and national professional and community organizations. These include the executive committee of the American Health Care Association, president of the Massachusetts Federation of Nursing Homes, the board of the Alzheimer's Disease and Related Disorders Association, the board of Simmons College, secretary of the National Association of Social Workers, and president-elect of the Society for Hospital Social Work Directors of the American Hospital Association. She is a member of the Business Leadership Forum and Women's Leadership Forum of the Democratic National Committee. She also served as a member of the Massachusetts Medicaid State Advisory Board. Ms. Bailis has published and lectured widely on health care and social welfare policy. She received a B.A. from Brandeis University and an M.S.W. from Simmons College School of Social Work.

Richard A. Berman

Richard A. Berman is president of Manhattanville College. Before joining Manhattanville, he was president and chief executive officer of Howe-Lewis International and previously was a vice president of Korn/Ferry International responsible for the health care practice in the firm's eastern region. Mr. Berman was also a practice leader for health care at McKinsey & Company, Inc. He serves as a trustee of the State University of New York. In addition, he is a member of New York State's Health Care Financing Council, New York's Governor's Task Force on Health Reform, and the New York State Legislature's Review Panel on Empire Blue Cross Blue Shield. Mr. Berman was the executive vice president of New York University Medical Center from 1983 to 1986. He was a cabinet official for New York State from 1977 to 1982, first as director of the New York State Office of Health Systems Management and later as the commissioner of the Division of Housing and Community Renewal. Before that, Mr. Berman served as director of health policy for the U.S. Economic Stabilization Program, and as special assistant to the assistant secretary of health, Department of Health and Human Services. He has also held administrative positions at the New York Hospital, Cornell University Medical School, the Robert Wood Johnson Foundation, and the University of Utah Hospital. He is a member of the Institute of Medicine of the National Academy of Sciences and a fellow of the American College of

Healthcare Executives. Mr. Berman has published many articles in the health care field. He received B.A., M.B.A., and M.H.A. degrees from the University of Michigan.

James D. Bernstein

James D. Bernstein is director of the North Carolina Office of Rural Health and Resources Development, which has established 54 community-based health centers and recruited more than 1,100 providers to the state since 1973. Previously, Mr. Bernstein administered a 40-bed hospital and eight health centers for the Indian Health Service. He has held a variety of professional positions, including chairman of the Rural Health Care Advisory Panel of the Office of Technology Assessment and chairman of the rural health steering committee of the National Academy for State Health Policy. He currently is national program director for the Robert Wood Johnson Foundation initiative, Practice Sites: State Primary Care Development Strategies, and is president of the National Rural Health Association. Mr. Bernstein received a B.A. from the Johns Hopkins University and an M.H.A. from the University of Michigan.

Clay D. Edmands

Clay D. Edmands is president of Asbury-Salina Regional Medical Center in Salina, Kansas, an acute care rural referral center. He was active in the development of Health Frontiers, Inc., a large multihospital organization that has been replaced by Voluntary Hospitals of America. His prior experience includes several years with the Fairview Hospital System in Minneapolis, Minnesota, where he held various positions, among them administrator for development and operations of regional health management and supportive services. Mr. Edmands participated on the Kansas Hospital Association Board from 1980 to 1992, serving as chairman, treasurer, and member of the executive committee. In addition to his two terms on the American Hospital Association Regional Policy Advisory Board, Mr. Edmands has been president of the Health Systems Agency of Western Kansas Board. Other community involvements include the Salina Health Education Board and Voluntary Hospitals of America. Mr. Edmands has been a faculty preceptor for the University of Minnesota independent study program in hospital administration. He currently is a preceptor for the University of Kansas program in health care administration and is chairman of the university's health care services advisory board. He holds a B.S. in business administration from the University of Kansas and an M.H.A. from the University of Minnesota.

William S. Hoffman

William S. Hoffman has been director of the Social Security Department of the International Union of the U.A.W. since 1984. Previously, he was the assistant director and a consultant to the department. Dr. Hoffman is also director of the Michigan Health and Social Security Research Institute, Inc., where from 1973 to 1980 he was a senior research associate. An active participant in national and state health care issues, Dr. Hoffman has served on the Michigan Certificate of Need Commission, the Department of Health and Human Services Council on Graduate Medical Education, the Department of Labor's Advisory Council on Employee Welfare and Pension Benefit Plans, the Governor's Task Force on Access to Health Care in Michigan, and various study committees of the Institute of Medicine of the National Academy of Sciences. He is a member of the National Academy of Social Insurance and an adjunct professor of sociology at Wayne State University. Dr. Hoffman has written and spoken extensively on such issues as the use of prepaid mental health care services and organized labor's perspective on current health care issues and legislation. He received a B.A. in psychology from Otterbein College, and M.A. and Ph.D. degrees in sociology from Wayne State University.

Clark E. Kerr

Clark E. Kerr is president of ConsumerFirst, a nonprofit public benefit corporation. He also is president of the California Business Group on Health, where he manages the legislative agenda. He chairs the California Health Policy and Data Advisory Commission, and the Consumer Experience Studies Committee of the Health Benefits Advisory Council for CalPERS. In addition, Mr. Kerr is executive producer and cohost of Health Upbeat, a television series providing information on health care quality, access, and costs to the public. Before joining ConsumerFirst, he held various positions at Bank of America, including vice president of government relations, manager of corporate health programs, and manager of benefits planning. Mr. Kerr received a B.A. from the University of California, Davis and an M.B.A. from the University of California, Berkeley.

James R. Kimmey

James R. Kimmey is vice president for health sciences and professor of public health at the St. Louis University Health Sciences Center, as well as professor of community and family medicine at the St. Louis University School of Medicine. In addition, Dr. Kimmey has taught at the University of Wisconsin, the Johns Hopkins University, New York University, and Columbia University. He was administrator of the Division of Health Policy and Planning of the state of Wisconsin and executive director of the American Public Health Association in New York and Washington State. Dr. Kimmey served as president of the American Health Planning Association (1980–81) and is a member of its board of directors. Former editor of *Health Planning Memorandum* and managing editor of the *American Journal of Public Health*, he has written extensively on health planning and other health policy topics. Dr. Kimmey received B.S., M.S., and M.D. degrees from the University of Wisconsin and an M.P.H. from the University of California, Berkeley.

Judith R. Lave

Judith R. Lave is professor of health economics and codirector of the Center for Research on Health Care at the University of Pittsburgh. Her primary academic appointment is in the Graduate School of Public Health, but she holds secondary appointments in the Department of Psychiatry, Department of Economics, and the Katz Graduate School of Business. She is a member of the research study section of the Agency for Health Care Policy and Research and of the Institute of Medicine's report review committee. Formerly, Dr. Lave was a faculty member at Carnegie-Mellon University. At the Department of Health and Human Services, she was director of the Division of Economic and Quantitative Analysis in the Office of the Deputy Assistant Secretary and director of the Office of Research in the Health Care Financing Administration. A charter member of the Federal government's Senior Executive Service, Dr. Lave is also a member of the Institute of Medicine of the National Academy of Sciences and the National Academy of Social Insurance. She is a past president of the Association for Health Services Research and the Foundation for Health Services Research. In addition, Dr. Lave chaired the technical panel on health and was a member of the expert panel on income and health care for the Advisory Council on Social Security. She serves on the editorial boards of both the *Journal of Health Politics, Policy and Law* and the Health Administration Press. Dr. Lave has served as a consultant to private and public agencies in the United States and Canada. She received a B.A. from Queens University in Canada, from which she also holds an honorary LL.D., and a Ph.D. in economics from Harvard University.

Larry L. Mathis

Larry L. Mathis has, since 1983, been president and chief executive officer of The Methodist Hospital System in Houston, Texas, which includes 10 member corporations and The Methodist Hospital. Before that, Mr. Mathis held a number of positions at The Methodist Hospital. Former chair of the Greater Houston Hospital Council and the Texas Hospital Association, he was also chairman of the American Hospital Association and speaker of its House of Delegates. Mr. Mathis is also a former member of the administrative board of the Association of American Medical Colleges' Council of Teaching Hospitals and a past governor of District VI of the American College of Healthcare Executives. He chaired the National Advisory Council on Health Care Technology Assessment from 1985 to 1988 and was a consultant to the Ministry of Education and Culture in Brazil. Mr. Mathis, who served in the U.S. Army from 1965 to 1970, received a B.A. in social sciences from Pittsburg State University in Kansas and an M.H.A. from Washington University.

Robert J. Myers

Robert J. Myers was chief actuary of the Social Security Administration from 1947 to 1970 and deputy commissioner of Social Security from 1981 to 1982. Currently, he is a member of the Committee of Actuaries of the United Nations Joint Staff Pension Fund, as well as president of the International Fisheries Commissions Pension Society. A trustee for several organizations, including the investment program (mutual funds) of the American Association of Retired Persons, Mr. Myers also serves on the boards of advisers of the Seniors Coalition and Studies on Smoking. An active participant in retirement and pension plan issues, Mr. Myers chaired the Commission on Railroad Retirement Reform (1988–90) and the Railroad Unemployment Compensation Committee (1983–85), and served on the Commission on the Social Security "Notch" Issue (1993–94). He was also executive director of the National Commission on Social Security Reform (1982–83). In addition, Mr. Myers has served as an actuarial consultant to various congressional committees, and as a technical adviser on Social Security and pension programs to numerous foreign countries. Besides holding several teaching positions, he has published on the topics of Social Security and retirement. In addition, Mr. Myers is a past president of both the American Academy of Actuaries and the Society of Actuaries. He received a B.S. degree from Lehigh University, an M.S. degree from the University of Iowa, and honorary degrees from Lehigh University and Muhlenberg College.

Donald R. Oder

Donald R. Oder is executive vice president and chief operating officer of Rush-Presbyterian-St. Luke's Medical Center in Chicago, where he formerly was senior vice president. Before that, he was audit manager with Arthur Andersen & Co. in Chicago. Mr. Oder has held various academic appointments and currently is a professor in the Department of Health Systems Management at the Rush University College of Health Sciences. He is a member of and has held leadership positions in several professional associations, including the American College of Healthcare Executives, the American Hospital Association, the Illinois Hospital Association, Voluntary Hospitals of America, the American Institute of Certified Public Accountants, and the Illinois C.P.A. Society. He has served on the board of directors of the Better Business Bureau of Metropolitan Chicago, Inc., and on the occupational health committee of the Chicago Association of Commerce and Industry. Mr. Oder received a B.S. from Wichita State University, a C.P.A. certificate from the University of Illinois, and an M.B.A. from the University of Chicago.

Elliott C. Roberts Sr.

Elliott C. Roberts Sr. is a professor in the Department of Health Systems Research and Public Health at the Louisiana State University Medical School. He is also an adjunct professor and preceptor in the Department of Health Systems Management at Tulane University School of Public Health and Tropical Medicine. In his previous position as chief executive officer of the Medical Center of Louisiana (formerly Charity Hospital at New Orleans), he assisted in the implementation of the reorganization of the Louisiana State Department of Health and Human Resources, which ultimately became the Louisiana Health Care Authority. Mr. Robert's prior positions include chief executive officer of Cook County Hospital in Chicago, vice president and associate project director for Hyatt Medical Management Services, and commissioner of hospitals and executive director of Detroit General Hospital. He also served as executive director at Harlem Hospital Center and Mercy Douglass Hospital in Philadelphia. An active member of the American Hospital Association (AHA), Mr. Roberts served on its board of trustees for five years as well as on the nominating committee, in the House of Delegates, and in other capacities. He is a past chairman of the Metropolitan Hospital Constituency Section of the AHA. Mr. Roberts has held similar positions of responsibility at the National Association of Public Hospitals and the Association of American Medical Colleges' Council on Teaching Hospitals. He is also a diplomate of the American College of Healthcare Executives. In addition to many other appointments, Mr. Roberts served on the Secretary's Commission on Nursing, Department of Health and Human Services. He received a B.A. from Morgan State College and an M.A. in business administration-hospital administration from the George Washington University.

J. Michael Sadaj

J. Michael Sadaj is a physician in private practice and a member of Rocky Mountain Clinic in Butte, Montana, where he specializes in internal medicine and pulmonary diseases. He has served as secretary-treasurer, vice president, and president of St. James Community Hospital medical staff, as well as chief of the department of medicine and chairman of the credentialing committee. From 1979 to 1990, Dr. Sadaj was medical director of respiratory therapy and the pulmonary laboratory at St. James. For several years, he served on the Occupational Diseases Board of the State of Montana. Dr. Sadaj is a past president of the Montana Medical Association (1988–89) and has been a member of the executive committee since 1985. In addition, he has served as a delegate to the American Medical Association (AMA) Resident Physician Section, Young Physician Section, and the AMA House of Delegates. From 1977 to 1979, he was the resident member on the AMA Council on Constitution and Bylaws. Dr. Sadaj is a founding member of the board of directors of the Montana Professional Assistance Program, and was a member of the Rural Physician Retention Trust Fund Advisory Board. In 1984, he was elected to the Butte-Silver Bow Government Study Commission. From 1974 to 1979, Dr. Sadaj was a resident in internal medicine and a fellow in pulmonary diseases at the University of Nebraska Medical Center. He received B.S. and M.D. degrees from the University of Nebraska.

Roxane B. Spitzer-Lehmann

Roxane B. Spitzer-Lehmann is vice president of managed care at MEDICUS Systems and visiting professor in the School of Business at the University of Colorado. Previously, she was corporate vice president of St. Joseph Health System in Orange, California, and chief operating officer of the Good Samaritan Hospital in Los Angeles. She holds various professorships at Texas Tech University Health Sciences Center: University of Southern California; University of California, Los Angeles; and Vanderbilt University. From 1981 to 1988, Dr. Spitzer-Lehmann was vice president, patient care services, at Cedars-Sinai Medical Center. Previously, she was director of nursing and practiced nursing in both inpatient and public health settings. She is a fellow of the American Academy of Nursing, a diplomate of the American College of Healthcare Executives, and serves on many other boards. Dr. Spitzer-Lehmann has written and spoken extensively on such issues as managing nonprofit organizations, cost containment, quality and productivity, nursing in the 1990s, and strategic management and leadership. She received a B.S. from Adelphi University, an M.A. in nursing service administration from Columbia University, and both an M.A. in management and an M.B.A. from Claremont Graduate School. Dr. Spitzer-Lehmann holds a Ph.D. in management from the Peter Drucker Management Center, Claremont Graduate School.

James R. Tallon Jr.

James R. Tallon Jr. is president of the United Hospital Fund of New York. He also chairs the Kaiser Commission on the Future of Medicaid and is a visiting lecturer at the Harvard University School of Public Health. In addition, he is a member of the board of commissioners of the Joint Commission on the Accreditation of Healthcare Organizations. Prior to joining the United Hospital Fund, he was the majority leader of the New York State Assembly, where he served for 19 years beginning in 1975. Mr. Tallon was a member of the executive committee of the National Academy for State Health Policy and served as liaison to the President's Task Force on Health Care Reform from the National Conference of State Legislatures. He also was a member of the Governor's Health Care Advisory Board's Task Force on the President's Health Care Plan in New York and chaired the committee on Medicaid of the Health Policy Agenda for the American People. Before his election to the Assembly, Mr. Tallon was the executive director of the NY-PENN Health Planning Council, one of New York's eight regional health planning agencies. Mr. Tallon received a B.A. from Syracuse University and completed graduate work at the Maxwell School of Citizenship and Public Affairs. He received an M.A. from Boston University.

Jae L. Wittlich

Jae L. Wittlich is senior vice president and chief operating officer, group benefits, CNA Insurance Companies. He also served as vice president of the group benefits department from 1985 to 1990 and as vice president of the group operations division from 1977 to 1985. Before joining CNA Insurance, Mr. Wittlich was with Allstate for 12 years, most recently as assistant vice president of group life and health operations. Besides being a member of the executive committee and board of directors of the Association of Private Pension and Welfare Plans, he serves on the boards of directors of the CNA Insurance Companies; Private Healthcare Systems, Inc.; the Foundation for Health Enhancement; Managed Healthcare Systems of New York; and the Health Insurance Association of America. In addition, Mr. Wittlich has served on many other industry association committees and lectured frequently on health care topics. He received the 1990 Health Insurance Association of America's Founders Medal. Mr. Wittlich is a fellow of the Society of Actuaries and a member of the American Academy of Actuaries. He holds B.A. and M.A. degrees from the University of Michigan.

Appendix D. Statutory Mandate of the Commission

Congress established the Prospective Payment Assessment Commission (ProPAC) in Public Law 98-21 (the Social Security Amendments of 1983) on April 20, 1983. The current responsibilities of ProPAC are set forth in sections 1862(a) and 1886 of the Social Security Act. Further responsibilities are set forth in various Acts and conferences reports. Below are the passages of the relevant legislative sources, as amended through 1994.

Section 1886(d) of the Social Security Act

(4)(C)(i) The Secretary shall adjust the classifications and weighting factors established under subparagraphs (A) and (B) [DRG classifications], for discharges in fiscal year 1988 and at least annually thereafter, to reflect changes in treatment patterns, technology, and other factors which may change the relative use of hospital resources.

(ii) For discharges in fiscal year 1990, the Secretary shall reduce the weighting factor for each diagnosis-related group by 1.22 percent.

(iii) Any such adjustment under clause (i) for discharges in a fiscal year (beginning with fiscal year 1991) shall be made in a manner that assures that the aggregate payments under this subsection for discharges in the fiscal year are not greater or less than those that would have been made for discharges in the year without such adjustment.

(iv) The Secretary shall include recommendations with respect to adjustments to weighting factors under clause (i) in the annual report to Congress required under subsection (e)(3)(B).

Section 1886(e)(2) through (6) of the Social Security Act

(2)(A) The Director of the Congressional Office of Technology Assessment (hereinafter in this subsection referred to as the "Director" and the "Office," respectively) shall provide for appointment of a Prospective Payment Assessment Commission (hereinafter in this subsection referred to as the "Commission"), to be composed of independent experts appointed by the Director (without regard to the provisions of title 5, United States Code, governing appointments in the competitive service). The Commission shall review the applicable percentage increase factor described in subsection (b)(3)(B) and make recommendations to the [Congress] on the appropriate percentage change which should be effected for hospital inpatient discharges under subsections (b) and (d) for fiscal years beginning with fiscal year 1986. In making its recommendations, the Commission shall take into account changes in the hospital market-basket described in subsection (b)(3)(B), hospital productivity, technological and scientific advances, the quality of health care provided in hospitals (including the quality and skill level of professional nursing required to maintain quality care), and long-term cost-effectiveness in the provision of inpatient hospital services.

(B) In order to promote the efficient and effective delivery of high-quality health care services, the Commission shall, in addition to carrying out its functions under subparagraph (A), study and make recommendations for each fiscal year regarding changes in each existing reimbursement policy under this title under which payments to an institution are based upon prospectively determined rates and the development of new institutional reimbursement policies under this title, including recommendations related to payments during such fiscal year under the prospective payment system established under this section for determining payments for the operating costs of inpatient hospital services, including changes in the number of diagnosis-related groups used to classify inpatient hospitals discharges under subsection (d), adjustments to such groups to reflect severity of illness, and changes in the methods by which hospitals are reimbursed for capital-related costs, together with general recommendations on the effectiveness and quality of health care delivery systems in the United States and the effects on such systems of institutional reimbursements under this title.

(C) By not later than June 1 of each year, the Commission shall submit a report to Congress containing an examination of issues affecting health care delivery in the United States, including issues relating to—

(i) trends in health care costs;

(ii) the financial condition of hospitals and the effect of the level of payments made to hospitals under this title on such condition;

(iii) trends in the use of health care services; and

(iv) new methods used by employers, insurers, and others to constrain growth in health care costs.

(3)(A) The Commission, not later than March 1 before the beginning of each fiscal year (beginning with fiscal year 1986) shall report its recommendations to Congress on an appropriate change factor which should be used for inpatient hospital services in that fiscal year, together with its general recommendations under paragraph (2)(B) regarding the effectiveness and quality of health care delivery systems in the United States.

(B) The Secretary, not later than April 1, 1987, for fiscal year 1988 and not later than March 1, before the beginning of each fiscal year (beginning with fiscal year 1989), shall report to the Congress the Secretary's initial estimate of the percentage change that the Secretary will recommend under paragraph (4) with respect to that fiscal year.

(4)(A) Taking into consideration the recommendations of the Commission, the Secretary shall recommend for each fiscal year (beginning with fiscal year 1988) an appropriate change factor for inpatient hospital services for discharges in that fiscal year which will take into account amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality. The appropriate change factor may be different for all large urban subsection (d) hospitals, other urban subsection (d) hospitals, urban subsection (d) Puerto Rico hospitals, rural subsection (d) hospitals, and rural subsection (d) Puerto Rican hospitals, and all other hospitals and units not paid under subsection (d), and may vary among such other hospitals and units.

(B) In addition to the recommendation made under subparagraph (A), the Secretary shall, taking into consideration the recommendations of the Commission under paragraph (2)(B), recommend for each fiscal year (beginning with fiscal year 1992) other appropriate changes in each existing reimbursement policy under this title under which payments to an institution are based upon prospectively determined rates.

(5) The Secretary shall cause to have published in the *Federal Register*, not later than—

(A) the May 1 before each fiscal year (beginning with fiscal year 1986), the Secretary's proposed recommendations under paragraph (4) for that fiscal year for public comment, and

(B) the September 1 before such fiscal year after such consideration of public comment on the proposal as is feasible in the time available, the Secretary's final recommendations under such paragraph for that year.

The Secretary shall include in the publication referred to in subparagraph (A) for a fiscal year the report of the Commission's recommendations submitted under paragraph (3) for that fiscal year. To the extent that the Secretary's recommendations under paragraph (4) differ from the Commission's recommendations for that fiscal year, the Secretary shall include in the publication referred to in subparagraph (A) an explanation of the Secretary's grounds for not following the Commission's recommendations.

(6)(A) The Commission shall consist of 17 individuals. Members of the Commission shall first be appointed no later than April 1, 1984, for a term of three years, except that the Director may provide initially for such shorter terms as will insure that (on a continuing basis) the terms of no more than seven members may expire in any one year.

(B) The membership of the Commission shall include individuals with national recognition for their expertise in health economics, health facility management, reimbursement of health facilities or other providers of services which reflect the scope of the Commission's responsibilities, and other related fields, who provide a mix of different professional, broad geographic representation, and a balance between urban and rural representatives, including physicians and registered professional nurses, employers, third party payors, individuals skilled in the conduct and interpretation of biomedical, health services, and health economics research, and individuals having expertise in the research and development of technological and scientific advances in health care.

(C) Subject to such review as the Office deems necessary to assure the efficient administration of the Commission, the Commission may—

(i) employ and fix the compensation of an Executive Director (subject to the approval of the Director of the Office) and such other personnel (not to exceed 25) as may be necessary to carry out its duties (without regard to the provisions of the title 5, United States Code, governing appointments in the competitive service);

(ii) seek such assistance and support as may be required in the performance of its duties from appropriate Federal departments and agencies;

(iii) enter into contracts or make other arrangements, as may be necessary for the conduct of the work of the Commission (without regard to section 3709 of the Revised Statutes (41 U.S.C. 5));

(iv) make advance, progress, and other payments which relate to the work of the Commission;

(v) provide transportation and subsistence for persons serving without compensation; and

(vi) prescribe such rules and regulations as it deems necessary with respect to the internal organization and operation of the Commission.

Section 10(a)(1) of the Federal Advisory Committee Act shall not apply to any portion of a Commission meeting if the Commission, by majority vote, determines that such portion of such meeting should be closed.

(D) While serving on the business of the Commission (including travel-time), a member of the Commission shall be entitled to compensation at the per diem equivalent of the rate provided for level IV of the Executive Schedule under section 5315 of title 5, United States Code; and while so serving away from home and his regular place of business, a member may be allowed travel expenses, as authorized by the Chairman of the Commission. Physicians serving as personnel of the Commission may be provided a physician comparability allowance by the Commission in the same manner as Government physicians may be provided such an allowance by an agency under section 5948 of title 5, United States Code, and for such purpose subsection (i) of such section shall apply to the Commission in the same manner as it applies to the Tennessee Valley Authority. For purposes of pay (other than pay of members of the Commission) and employment benefits, rights, and privileges, all personnel of the Commission shall be treated as if they were employees of the United States Senate.

(E) In order to identify medically appropriate patterns of health resources use in accordance with paragraph (2), the Commission shall collect and assess information on medical and surgical procedures and services, including information on regional variations of medical practice and lengths of hospitalization and on other patient-care data, giving special attention to treatment patterns for conditions which appear to involve excessively costly or inappropriate services not adding to the quality of care provided. In order to assess the safety, efficacy, and cost-effectiveness of new and existing medical and surgical procedures, the Commission shall, in coordination to the extent possible with the Secretary, collect and assess factual information, giving special attention to the needs of updating existing diagnosis-related groups, establishing new diagnosis-related groups, and making recommendations on relative weighting factors for such groups to reflect appropriate differences in resource consumption in delivering safe, efficacious, and cost-effective care. In collecting and assessing information, the Commission shall—

(i) utilize existing information, both published and unpublished, where possible, collected and assessed either by its own staff or under other arrangements made in accordance with this paragraph;

(ii) carry out, award grants or contracts for, original research and experimentation, including clinical research, where existing information is inadequate for the development of useful and valid guidelines by the Commission; and

(iii) adopt procedures allowing any interested party to submit information with respect to medical and surgical procedures and services (including new practices, such as the use of new technologies and treatment modalities), which information the Commission shall consider in making reports and recommendations to the Secretary and Congress.

(F) The Commission shall have access to such relevant information and data as may be available from appropriate Federal agencies and shall assure that its activities, especially the conduct of original research and medical studies, are coordinated with the activities of Federal agencies.

(G)(i) The Office shall have unrestricted access to all deliberations, records, and data of the Commission, immediately upon its request.

(ii) In order to carry out its duties under this paragraph, the Office is authorized to expend reasonable and necessary funds as mutually agreed upon by the Office and the Commission. The Office shall be reimbursed for such funds by the Commission from the appropriations made with respect to the Commission.

(H) The Commission shall be subject to periodic audit by the General Accounting Office.

(I)(i) There are authorized to be appropriated such sums as may be necessary to carry out the provision of this paragraph.

(ii) Eighty-five percent of such appropriation shall be payable from the Federal Hospital Insurance Trust Fund, and 15 percent of such appropriation shall be payable from the Federal Supplementary Medical Insurance Trust Fund.

(J) The Commission shall submit requests for appropriations in the same manner as the Office submits requests for appropriations, but amounts appropriated for the Commission shall be separate from amounts appropriated for the Office.

Section 1862(a) of the Social Security Act

(a) Notwithstanding any other provision of this title, no payment may be made under part A or part B for any expenses incurred for items or services—

(1)(A) which, except for items and services described in a succeeding subparagraph, are not reasonable and necessary for the diagnosis or treatment of illness or injury or to improve the functioning of a malformed body member,

(B) in the case of items and services described in section 1861(s)(10), which are not reasonable and necessary for the prevention of illness,

(C) in the case of hospice care, which are not reasonable and necessary for the palliation or management of terminal illness,

(D) in the case of clinical care items and services provided with the concurrence of the Secretary and with respect to research and experimentation conducted by, or under contract with, the Prospective Payment Assessment Commission or the Secretary, which are not reasonable and necessary to carry out the purposes of section 1886(e)(6), . . .

Section 1135(d) of the Social Security Act

(6)(A) The Secretary shall develop a model system for the payment for outpatient hospitals services other than ambulatory surgery.

(B) The Secretary shall submit to Congress a report on the model payment system under subparagraph (A) by January 1, 1991.

(7) The Secretary shall solicit the views of the Prospective Payment Assessment Commission in developing the systems under paragraphs (1) and (6), and shall include in the Secretary's reports under this subsection any views the Commission may submit with respect to such systems.

Section 9114 of the Consolidated Omnibus Budget Reconciliation Act of 1985, Pub. L. 99-272

(a) Disclosure of Information.—The Secretary of Health and Human Services shall make available to the Prospective Payment Assessment Commission, the Congressional Budget Office, and the Congressional Research Service the most current information on the payments being made under section 1886 of the Social Security Act to individual hospitals. Such information shall be made available in a manner that permits examination of the impact of such section on such hospitals.

(b) Confidentiality.—Information disclosed under subsection (a) shall be treated as confidential and shall not be subject to further disclosure in a manner that permits the identification of individual hospitals.

Section 6003(i) of the Omnibus Budget Reconciliation Act of 1989, Pub. L. 101-239: Legislative Proposal Eliminating Separate Average Standardized Amounts

(1) In General.—The Secretary of Health and Human Services (hereafter referred to as the "Secretary") shall design a legislative proposal eliminating the system of determining separate standardized amounts for subsection (d) hospitals (as defined in section 1886(d)(1)(B) of the Social Security Act) classified as being located in large urban, other urban, or rural areas under section 1886(d)(2)(D) of such Act, and shall include in such proposal the following—

(A) A transition period beginning in fiscal year 1992 during which a single rate for determining payment to hospitals in all areas shall be phased in with such single rate to be completely in effect by fiscal year 1995.

(B) Recommendations, where appropriate, for modifying or maintaining additional payments or adjustments under title XVIII of the Social Security Act for teaching hospitals, rural referral centers, sole community hospitals, disproportionate share hospitals, and outlier cases, and for creating additional payments or adjustments where deemed appropriate by the Secretary.

(C) Recommendations with respect to recalculating standardized amounts to reflect information from more recent cost reporting periods.

(D) Recommendations, where appropriate, for modifying reimbursement for hospitals that are not subsection (d) hospitals under title XVIII of such Act.

(E) A recommendation for a methodology to reflect the severity of illness of different patients within the same diagnosis related group (as determined in section 1886(d)(4)(B) of such Act).

(2) Report to Congress and ProPAC.—(A) Not later than October 1, 1990, the Secretary shall submit the proposal described in paragraph (1) and an accompanying analysis of the impact of the proposed elimination of separate average standardized amounts on various categories of hospitals to Congress and the Prospective Payment Assessment Commission.

(B) Not later than February 1, 1991, the Prospective Payment Assessment Commission and the Director of the Congressional Budget Office shall each prepare and submit to Congress a report analyzing the legislative proposal submitted under subparagraph (A), and shall include in such report an analysis of the probable impact of such legislation on hospitals participating in the Medicare program.

Section 6003(j) of the Omnibus Budget Reconciliation Act of 1989, Pub. L. 101-239: ProPac Study of Payments to Rural Sole Community Hospitals and Small Rural Hospitals

(1) Study.— The Prospective Payment Assessment Commission (hereinafter referred to as the "Commission") shall conduct a study of the feasibility and desirability of—

(A) using a cost-based reimbursement system to determine the amount of payments to be made under the Medicare program to small rural hospitals and rural sole community hospitals for the operating costs of inpatient hospital services;

(B) developing and applying alternative definitions of market share for use in determining the eligibility of hospitals for classification as sole community hospitals under section 1886(d)(5) of the Social Security Act; and

(C) developing and applying a method for accounting for decreases in the number of inpatients served in determining payment to small rural hospitals under section 1886(d) of the Social Security Act for the operating costs of inpatient hospital services.

(2) Report.—By not later than May 1, 1990, the Commission shall submit a report to Congress on the study conducted under paragraph (1).

Section 6011 of the Omnibus Budget Reconciliation Act of 1989, Pub. L. 101-239 Pass Through Payments for Hemophilia Inpatients

(a) Pass Through Payment for Hemophilia Inpatients.—The second sentence of section 1886(a)(4) of the Social Security Act . . . is amended to read as follows—

> For purposes of this section, the term "operating cost of inpatient hospital services" . . . does not include . . . costs with respect to administering blood clotting factors to individual with hemophilia.

(b) Determining Payment Amount.—The Secretary of Health and Human Services shall determine the amount of payment made to hospitals under part A of title XVIII of the Social Security Act for the costs of administering blood clotting factors to individuals with hemophilia by multiplying a predetermined price per unit of blood clotting factor (determined in consultation with the Prospective Payment Assessment Commission) by the number of units provided to the individual.

(c) Recommendations on Payments.—The Prospective Payment Assessment Commission and the Health Care Financing Administration shall develop recommendations with respect to payments under part A of title XVIII of the Social Security Act for the costs of administering blood clotting factors to individuals with hemophilia, and shall submit such recommendations to Congress not later than 18 months after the date of enactment of this Act.

Section 6137 of the Omnibus Budget Reconciliation Act of 1989, Pub. L. 101-239: ProPAC Study of Payments for Services in Hospital Outpatient Departments

(a) In General.—The Prospective Payment Assessment Commission shall conduct a study on payment under title XVIII of the Social Security Act for hospital outpatient services. Such study shall include an examination of—

(1) the sources of growth in spending for hospital outpatient services;

(2) the differences between the costs of delivering services in a hospital outpatient department as opposed to providing similar services in other appropriate settings (including ambulatory surgery centers and physician offices);

(3) the effects on outpatient hospital costs of the step-down method used to allocate hospital capital between inpatient and outpatient departments and the extent to which hospital outpatient costs were affected by the implementation of the prospective payment system of payment for inpatient hospital services and by increased review of such services by peer review organizations; and

(4) alternative methods for reimbursing hospitals for services in outpatient departments under the Medicare program, including prospective payment methods, fee schedules, and other such methods as the Commission may consider appropriate.

(b) Reports.—(1) By not later than July 1, 1990, the Commission shall submit a report to Congress on the study conducted under section (a) with respect to the portions of the study described in paragraphs (1), (2), and (3) of such subsection, and shall include in the report such recommendations as the Commission deems appropriate.

(2) By not later than March 1, 1991, the Commission shall submit a report to Congress on the study conducted under subsection (a) with respect to the portion of the study described in paragraph (4) of such subsection, and shall include such recommendations as the Commission deems appropriate.

Section 4002(d)(2) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: Study of the Area Wage Index Adjustments Based on Professional Occupational Component

(A) Study.—The Prospective Payment Assessment Commission shall examine available data from States and other sources measuring earnings and paid hours of employment of hospital workers by occupational category, and shall include in such examination an analysis of the impact of variation in occupational mix on the computation of the area wage index determined under section 1886(d)(3(E) of the Social Security Act.

(B) Report to Congress.—In its March 1991 report, the Commission shall include recommendations regarding the feasibility and desirability of modifying such area wage index to take into account occupational mix, including variations in occupational mix resulting from differences in State codes and requirements.

Section 4002(g)(4) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: ProPAC Study of Medicaid Payments to Hospitals

(A) Study.—The Prospective Payment Assessment Commission shall conduct a study of hospital payment rates under State plans for medical assistance under title XIX of the Social Security Act, and shall specifically examine in such study the relationship between payments under such plans and payments made to hospitals under title XVIII of such Act, and the financial condition of hospitals receiving payments under such plans, with particular attention to hospitals in urban areas which treat large number of individuals eligible for medical assistance under title XIX of such Act and other low-income individuals.

(B) Report.—By not later than October 1, 1991, the Commission shall submit a report to Congress on the study conducted under subparagraph (A) and shall include in such report such recommendations relating to requirements for payments to hospitals under title XIX of such Act as the Commission deems appropriate.

Section 4005(b) of the of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: Development of National Prospective Payment Rates for Current Non-PPS Hospitals

(1) Development of Proposal.—The Secretary of Health and Human Services shall develop a proposal to modify the current system under which hospitals that are not subsection (d) hospitals (as defined in section 1886(d)(1)(B) of the Social Security Act) receive payment for the operating and capital-related costs of inpatient hospital services under part A of the Medicare program or a proposal to replace such system with a system under which such payments would be made on the basis of nationally-determined average standardized amounts. In developing any proposal under this paragraph to replace the current system with a prospective payment system, the Secretary shall—

(A) take into consideration the need to provide for appropriate limits on increases in expenditures under the Medicare program;

(B) provide for adjustments to prospectively determined rates to account for changes in a hospital's case mix, severity of illness of patients, volume of cases, and the development of new technologies and standards of medical practice;

(C) take into consideration the need to increase the payment otherwise made under such system in the case of services provided to patients whose length of stay or costs of treatment greatly exceed the length of stay or cost of treatment provided for under the applicable prospectively determined payment rate;

(D) take into consideration the need to adjust payments under the system to take into account factors such as a disproportionate share of low-income patients, costs related to graduate medical education programs, differences in wages and wage-related costs among hospitals located in various geographic areas, and other factors the Secretary considers appropriate, and

(E) provide for the appropriate allocation of operating and capital-related costs of hospitals not subject to the new prospective payment system and distinct units of such hospitals that would be paid under such system.

(2) Report.—(A) By not later than April 1, 1992, the Secretary shall submit the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

(B) By not later than June 1, 1992, the Prospective Payment Assessment Commission shall submit an analysis of and comments on the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

Section 4008(k) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: Prospective Payment System for Skilled Nursing Facilities

(1) Development of Proposal.—The Secretary of Health and Human Services shall develop a proposal to modify the current system under which skilled nursing facilities receive payment for extended care services under part A of the Medicare program or a proposal to replace such system with a system under which such payments would be made on the basis of prospectively determined rates. In developing any proposal under this paragraph to replace the current system with a prospective payment system, the Secretary shall—

(A) take into consideration the need to provide for appropriate limits on increases in expenditures under the Medicare program without jeopardizing access to extended care services for individuals unable to care for themselves;

(B) provide for adjustments to prospectively determined rates to account for changes in a facility's case mix, volume of cases, and the development of new technologies and standards of medical practice;

(C) take into consideration the need to increase the payment otherwise made under such system in the case of services provided to patients whose length of stay or costs of treatment greatly exceed the length of stay or cost of treatment provided for under the applicable prospectively determined payment rate;

(D) take into consideration the need to adjust payments under the system to take into account factors such as a disproportionate share of low-income patients, differences in wages and wage-related costs among facilities located in various geographic areas, and other factors the Secretary considers appropriate; and

(E) take into consideration the appropriateness of classifying patients and payments upon functional disability, cognitive impairment, and other patient characteristics.

(2) Reports.—(A) By not later than April 1, 1991, the Secretary (acting through the Administrator of the Health Care Financing Administration) shall submit any research studies to be used in developing the proposal under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

(B) By not later than September 1, 1991, the Secretary shall submit the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

(C) By not later than March 1, 1992, the Prospective Payment Assessment Commission shall submit an analysis of and comments on the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

Section 4151(b)(2) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: Prospective Payment System for Hospital Outpatient Services

(A) Development of Proposal.—The Secretary of Health and Human Services shall develop a proposal to replace the current system under which payment is made for hospital outpatient services under title XVIII of the Social Security Act with a system under which such payments would be made on the basis of prospectively determined rates. In developing any proposal under this paragraph, the Secretary shall consider—

(i) the need to provide for appropriate limits on increases in expenditures under the Medicare program;

(ii) the need to adjust prospectively determined rates to account for changes in a hospital's outpatient case mix, severity of illness of patients, volume of cases, and the development of new technologies and standards of medical practice;

(iii) providing hospitals with incentives to control the costs of providing outpatient services;

(iv) the feasibility and appropriateness of including payment for outpatient services not currently paid on a cost-related basis under the Medicare program (including clinical diagnostic laboratory tests and dialysis services) in the system;

(v) the need to increase payments under the system to hospitals that treat a disproportionate share of low-income patients, teaching hospitals, and hospitals located in geographic areas with high wages and wage-related costs;

(vi) the feasibility and appropriateness of bundling services into larger units, such as episodes or visits, in establishing the basic unit for making payments under the system; and

(vii) the feasibility and appropriateness of varying payments under the system on the basis of whether services are provided in a free-standing or hospital-based facility.

(B) Reports.—(i) By not later than January 1, 1991, the Administrator of the Health Care Financing Administration shall submit research findings relating to prospective payments for hospital outpatient services to the Committee on Finance of the Senate and the Committees on Ways and Means and Energy and Commerce of the House of Representatives.

(ii) By not later than September 1, 1991, the Secretary shall submit the proposal developed under subparagraph (A) to such Committees.

(iii) By not later than March 1, 1992, the Prospective Payment Assessment Commission shall submit an analysis of and comments on the proposal developed under subparagraph (A) to such Committees.

Section 4201(b) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: ProPAC Study on ESRD Composite Rates

(1) In General.—(A) Study.—The Prospective Payment Assessment Commission (in this subsection referred to as the "Commission") shall conduct a study to determine the costs and services and profits associated with various modalities of dialysis treatments provided to end stage renal disease patients provided under title XVIII of the Social Security Act.

(B) Recommendations.—Based on information collected for the study described in subparagraph (A), the Commission shall make recommendations to Congress regarding the method or methods and the levels at which the payments made for the facility component of dialysis services by providers of service and renal dialysis facilities under title XVIII of the Social Security Act should be established for dialysis services furnished during fiscal year 1993 and the methodology to be used to update such payments for subsequent fiscal years. In making recommendations concerning the appropriate methodology the Commission shall consider—

(i) hemodialysis and other modalities of treatment,

(ii) the appropriate services to be included in such payments,

(iii) the adjustment factors to be incorporated including facility characteristics, such as hospital versus free-standing facilities, urban versus rural, size and mix of services,

(iv) adjustments for labor and non-labor costs,

(v) comparative profit margins for all types of renal dialysis providers of service and renal dialysis facilities,

(vi) adjustments for patient complexity, such as age, diagnosis, case mix, and pediatric services, and

(vii) efficient costs related to high quality of care and positive outcomes for all treatment modalities.

(2) Report.—Not later than June 1, 1992, the Commission shall submit a report to the Committee on Finance of the Senate, and the Committees on Ways and Means and Energy and Commerce of the House of Representatives on the study conducted under paragraph (1)(A) and shall include in the report the recommendations described in paragraph (1)(B), taking into account the factors described in paragraph (1)(B).

(3) Annual Report.—The Commission, not later than March 1 before the beginning of each fiscal year (beginning with fiscal year 1993) shall report its recommendations to the Committee on Finance of the Senate and the Committees on Ways and

Means and Energy and Commerce of the House of Representatives on an appropriate change factor which should be used for updating payments for services rendered in that fiscal year. The Commission in making such report to Congress shall consider conclusions and recommendations available from the Institute of Medicine.

Section 4207(c) of the Omnibus Budget Reconciliation Act of 1990, Pub. L. 101-508: Development of Prospective Payment System for Home Health Services

(1) Development of Proposal.—The Secretary of Health and Human Services shall develop a proposal to modify the current system under which payment is made for home health services under title XVIII of the Social Security Act or a proposal to replace such system with a system under which such payments would be made on the basis of prospectively determined rates. In developing any proposal under this paragraph to replace the current system with a prospective payment system, the Secretary shall—

(A) take into consideration the need to provide for appropriate limits on increases in expenditures under the Medicare program;

(B) provide for adjustments to prospectively determined rates to account for changes in a provider's case mix, severity of illness of patients, volume of cases, and the development of new technologies and standards of medical practice;

(C) take into consideration the need to increase the payment otherwise made under such system in the case of services provided to patients whose length of treatment or costs of treatment greatly exceed the length or cost of treatment provided for under the applicable prospectively determined payment rate;

(D) take into consideration the need to adjust payments under the system to take into account factors such as differences in wages and wage-related costs among agencies located in various geographic areas and other factors the Secretary considers appropriate; and

(E) analyze the feasibility and appropriateness of establishing the episode of illness as the basic unit for making payments under the system.

(2) Reports.—(A) By not later than April 1, 1993, the Secretary of Health and Human Services shall submit the research findings upon which the proposal described in paragraph (1) shall be based to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

(B) By not later than September 1, 1993, the Secretary shall submit the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

(C) By not later than March 1, 1994, the Prospective Payment Assessment Commission shall submit an analysis of and comments on the proposal developed under paragraph (1) to the Committee on Finance of the Senate and the Committee on Ways and Means of the House of Representatives.

H.R. Rep. No. 964, 101st Cong., 1st Sess. (1990)

(Report of the Committee of Conferees, Pub. L. 101-508)

In performing this function [developing and modification of reimbursement policies], the conferees intend that ProPAC would include in its analysis and recommendations, proposals for changes in policies regarding: (1) payment for inner-city hospitals, including appropriate recognition of bad debt and charity care costs; (2) payment for rural hospitals including recommendations on appropriate responses to issues affecting access to health care services in rural areas; and (3) policies which help constrain the costs of health care to employers, including changes in Medicare and its payment policies which may affect other payers.

S.R. Rep. No. 516, 101st Cong., 2nd Sess. (1990)

(Report of the Senate Committee on
Appropriations, H.R. 5257)

The Committee, therefore, requests that ProPAC issue a report listing (1) the adjustments that have been made to PPS since its inception (for example changes in standardized amount, outlier pool, consideration of part-time labor); and (2) the amount of increased payments (taking inflation into account) for PPS years 1-5 and what rural hospitals would have received if these adjustments had been in place from the system's beginning.

In addition, the Committee request that ProPAC in its 1991 report address in detail the impact of less-than-average patient volume on overhead costs and reimbursement, especially on small hospitals. This Committee remains concerned that the PPS system, which is based on averages, inherently is inappropriate to small-volume hospitals.

Given the history of inequitable inpatient payments and the widespread concern over new systems of outpatient payments, the Committee finds it is necessary to investigate whether outpatient payment systems also will be biased against smaller rural providers. The Committee requests that ProPAC in its 1991 report identify all potential outpatient payment biases against small rural hospitals, and recommend actions to correct them.

The Committee is concerned that the Federal Office of Rural Health Policy lacks essential resources such as computer capability in order to fulfill its statutory mandate to provide impact analyses of proposed Medicare and Medicaid regulations. The Committee instructs ProPAC to provide its resources to the Office of Rural Health Policy in order to facilitate these analyses. The Committee expects The Commission to provide technical assistance to the Office of Rural Health Policy.

The Committee urges ProPAC to continue to study the use of nurse practitioners and other nonphysician providers in alternative settings to acute care and long-term institutional care.

Section 3(d) of the Medicaid Voluntary Contribution and Provider-Specific Tax Amendments of 1991, Pub. L. 102-234: Study of Medicaid DSH Payment Adjustments

(1) In General.—The Prospective Payment Assessment Commission shall conduct a study concerning—

(A) the feasibility and desirability of establishing maximum and minimum payment adjustments under section 1923(c) of the Social Security Act for hospitals deemed disproportionate share hospitals under State medicaid plans, and

(B) criteria (other than criteria described in clause (i) or (ii) of section 1923(f)(1)(D) of such Act) that are appropriate for the designation of disproportionate share hospitals under section 1923 of such Act.

(2) Items Included In Study.—The Commission shall include in the study—

(A) a comparison of the payment adjustments for hospitals made under such section and the additional payments made under title XVIII of such Act for hospitals serving a significantly disproportionate number of low-income patients under the medicare program; and

(B) an analysis of the effect the establishment of limits on such payment adjustments will have on the ability of the hospitals to be reimbursed for the resource costs incurred by the hospitals in treating individuals entitled to medical assistance under State medicaid plans and other low-income patients.

(3) Report.—Not later than January 1, 1994, the Commission shall submit a report on the study conducted under paragraph (1) to the Committee on Finance of the Senate and the Committee on Energy and Commerce of the House of Representatives. Such report shall include such recommendations respecting the designation of disproportionate share hospitals and the establishment of maximum and minimum payment adjustments for such hospitals under section 1923 of the Social Security Act as may be appropriate.

H.R. Rep. No. 103-213, 103rd Cong., 1st Sess. (1993)

(Report of the Conference Committee, Omnibus Budget Reconciliation Act of 1993, Pub. L. 103-66)

The conferees note that the Prospective Payment Assessment Commission has expressed concern that the Secretary's outlier policy penalizes hospitals that receive a large number of transfer cases. The conferees expect that the Commission will evaluate whether the changes in outlier policy required by this Act will be sufficient to reduce the risk of large losses on transfer cases for such hospitals and make recommendations regarding whether additional changes in payment methodology would be appropriate.

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
1	1	SURG	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.1556	3.1565	0.0
2	1	SURG	CRANIOTOMY FOR TRAUMA AGE >17	3.1381	3.0968	-1.3
3	1	SURG	CRANIOTOMY AGE 0-17	3.0176	3.0398	0.7
4	1	SURG	SPINAL PROCEDURES	2.3847	2.3292	-2.3
5	1	SURG	EXTRACRANIAL VASCULAR PROCEDURES	1.5361	1.5601	1.6
6	1	SURG	CARPAL TUNNEL RELEASE	0.6271	0.6339	1.1
7	1	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC WITH CC	2.5180	2.5005	-0.7
8	1	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC W/O CC	0.8576	0.9185	7.1
9	1	MED	SPINAL DISORDERS & INJURIES	1.3397	1.2553	-6.3
10	1	MED	NERVOUS SYSTEM NEOPLASMS WITH CC	1.2819	1.2618	-1.6
11	1	MED	NERVOUS SYSTEM NEOPLASMS W/O CC	0.7691	0.7734	0.6
12	1	MED	DEGENERATIVE NERVOUS SYSTEM DISORDERS	0.9449	0.9574	1.3
13	1	MED	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA	0.8108	0.7813	-3.6
14	1	MED	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.2056	1.1956	-0.8
15	1	MED	TRANSIENT ISCHEMIC ATTACK & PRECEREBRAL OCCLUSIONS	0.6766	0.6909	2.1
16	1	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS WITH CC	1.1141	1.0488	-5.9
17	1	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC	0.6648	0.6195	-6.8
18	1	MED	CRANIAL & PERIPHERAL NERVE DISORDERS WITH CC	0.9202	0.9126	-0.8
19	1	MED	CRANIAL & PERIPHERAL NERVE DISORDERS W/O CC	0.5927	0.5925	0.0
20	1	MED	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	2.0613	2.0828	1.0
21	1	MED	VIRAL MENINGITIS	1.4304	1.4342	0.3
22	1	MED	HYPERTENSIVE ENCEPHALOPATHY	0.7286	0.7806	7.1
23	1	MED	NONTRAUMATIC STUPOR & COMA	0.8407	0.8004	-4.8
24	1	MED	SEIZURE & HEADACHE AGE >17 WITH CC	0.9759	0.9647	-1.1
25	1	MED	SEIZURE & HEADACHE AGE >17 W/O CC	0.5426	0.5515	1.6
26	1	MED	SEIZURE & HEADACHE AGE 0-17	0.9878	0.6270	-36.5
27	1	MED	TRAUMATIC STUPOR & COMA, COMA >1 HR	1.3311	1.3457	1.1
28	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 WITH CC	1.2078	1.2170	0.8
29	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 W/O CC	0.5941	0.6200	4.4
30	1	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE 0-17	0.3660	0.3687	0.7
31	1	MED	CONCUSSION AGE >17 WITH CC	0.7335	0.7627	4.0
32	1	MED	CONCUSSION AGE >17 W/O CC	0.4494	0.4635	3.1

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
33	1	MED	CONCUSSION AGE 0-17	0.2540	0.2559	0.7
34	1	MED	OTHER DISORDERS OF NERVOUS SYSTEM WITH CC	1.1103	1.0862	-2.2
35	1	MED	OTHER DISORDERS OF NERVOUS SYSTEM W/O CC	0.5656	0.5866	3.7
36	2	SURG	RETINAL PROCEDURES	0.6087	0.5989	-1.6
37	2	SURG	ORBITAL PROCEDURES	0.7843	0.8089	3.1
38	2	SURG	PRIMARY IRIS PROCEDURES	0.3716	0.4005	7.8
39	2	SURG	LENS PROCEDURES WITH OR WITHOUT VITRECTOMY	0.4723	0.5055	7.0
40	2	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	0.5586	0.6241	11.7
41	2	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	0.3782	0.3810	0.7
42	2	SURG	INTRAOCULAR PROCEDURES RETINA, IRIS & LENS	0.5777	0.5687	-1.6
43	2	MED	HYPHEMA	0.3814	0.3400	-10.9
44	2	MED	ACUTE MAJOR EYE INFECTIONS	0.5949	0.5755	-3.3
45	2	MED	NEUROLOGICAL EYE DISORDERS	0.6047	0.6211	2.7
46	2	MED	OTHER DISORDERS OF THE EYE AGE >17 WITH CC	0.7288	0.7553	3.6
47	2	MED	OTHER DISORDERS OF THE EYE AGE >17 W/O CC	0.4047	0.4331	7.0
48	2	MED	OTHER DISORDERS OF THE EYE AGE 0-17	0.4155	0.4186	0.7
49	3	SURG	MAJOR HEAD & NECK PROCEDURES	1.7937	1.7106	-4.6
50	3	SURG	SIALOADENECTOMY	0.6732	0.7131	5.9
51	3	SURG	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	0.6515	0.6838	5.0
52	3	SURG	CLEFT LIP & PALATE REPAIR	0.7697	0.9152	18.9
53	3	SURG	SINUS & MASTOID PROCEDURES AGE >17	0.7645	0.8647	13.1
54	3	SURG	SINUS & MASTOID PROCEDURES AGE 0-17	0.7124	0.7176	0.7
55	3	SURG	MISCELLANEOUS EAR, NOSE, MOUTH & THROAT PROCEDURES	0.5761	0.6455	12.0
56	3	SURG	RHINOPLASTY	0.6412	0.7684	19.8
57	3	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	0.9116	1.0174	11.6
58	3	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	0.3203	0.3227	0.7
59	3	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	0.4158	0.4602	10.7
60	3	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	0.2704	0.2724	0.7
61	3	SURG	MYRINGOTOMY W TUBE INSERTION AGE >17	1.0307	1.0019	-2.8
62	3	SURG	MYRINGOTOMY W TUBE INSERTION AGE 0-17	0.3194	0.3217	0.7
63	3	SURG	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES	1.0520	1.1047	5.0
64	3	MED	EAR, NOSE, MOUTH & THROAT MALIGNANCY	1.1571	1.1419	-1.3

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
65	3	MED	DYSEQUILIBRIUM	0.4952	0.5067	2.3
66	3	MED	EPISTAXIS	0.4909	0.5076	3.4
67	3	MED	EPIGLOTTITIS	0.8481	0.8381	-1.2
68	3	MED	OTITIS MEDIA & URI AGE >17 WITH CC	0.7158	0.7100	-0.8
69	3	MED	OTITIS MEDIA & URI AGE >17 W/O CC	0.5126	0.5133	0.1
70	3	MED	OTITIS MEDIA & URI AGE 0-17	0.3978	0.5812	46.1
71	3	MED	LARYNGOTRACHEITIS	0.6838	0.6508	-4.8
72	3	MED	NASAL TRAUMA & DEFORMITY	0.6079	0.6160	1.3
73	3	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE >17	0.7591	0.7616	0.3
74	3	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE 0-17	0.3545	0.3571	0.7
75	4	SURG	MAJOR CHEST PROCEDURES	3.0397	3.0551	0.5
76	4	SURG	OTHER RESP SYSTEM O.R. PROCEDURES WITH CC	2.4770	2.5126	1.4
77	4	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W/O CC	1.0443	1.0630	1.8
78	4	MED	PULMONARY EMBOLISM	1.4292	1.4211	-0.6
79	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 WITH CC	1.7332	1.6955	-2.2
80	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 W/O CC	0.9278	0.9259	-0.2
81	4	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE 0-17	1.1408	1.4323	25.6
82	4	MED	RESPIRATORY NEOPLASMS	1.3105	1.3237	1.0
83	4	MED	MAJOR CHEST TRAUMA WITH CC	0.9403	0.9530	1.4
84	4	MED	MAJOR CHEST TRAUMA W/O CC	0.4986	0.4996	0.2
85	4	MED	PLEURAL EFFUSION WITH CC	1.1891	1.1890	0.0
86	4	MED	PLEURAL EFFUSION W/O CC	0.6691	0.6753	0.9
87	4	MED	PULMONARY EDEMA & RESPIRATORY FAILURE	1.3495	1.3306	-1.4
88	4	MED	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1.0067	1.0053	-0.1
89	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 WITH CC	1.1447	1.1317	-1.1
90	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 W/O CC	0.6990	0.6924	-0.9
91	4	MED	SIMPLE PNEUMONIA & PLEURISY AGE 0-17	0.7767	0.6834	-12.0
92	4	MED	INTERSTITIAL LUNG DISEASE WITH CC	1.2039	1.2084	0.4
93	4	MED	INTERSTITIAL LUNG DISEASE W/O CC	0.7550	0.7700	2.0
94	4	MED	PNEUMOTHORAX WITH CC	1.2433	1.2427	0.0
95	4	MED	PNEUMOTHORAX W/O CC	0.6067	0.6146	1.3
96	4	MED	BRONCHITIS & ASTHMA AGE >17 WITH CC	0.8776	0.8488	-3.3

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
97	4	MED	BRONCHITIS & ASTHMA AGE >17 W/O CC	0.6067	0.6122	0.9
98	4	MED	BRONCHITIS & ASTHMA AGE 0-17	0.6840	0.5356	-21.7
99	4	MED	RESPIRATORY SIGNS & SYMPTOMS WITH CC	0.7149	0.7019	-1.8
100	4	MED	RESPIRATORY SIGNS & SYMPTOMS W/O CC	0.5004	0.5051	0.9
101	4	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES WITH CC	0.9035	0.9055	0.2
102	4	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES W/O CC	0.5282	0.5339	1.1
103	5	SURG	HEART TRANSPLANT	14.0215	13.5495	-3.4
104	5	SURG	CARDIAC VALVE PROCEDURE WITH CARDIAC CATH	7.6559	7.6076	-0.6
105	5	SURG	CARDIAC VALVE PROCEDURE W/O CARDIAC CATH	5.7990	5.7656	-0.6
106	5	SURG	CORONARY BYPASS WITH CARDIAC CATH	5.6791	5.6683	-0.2
107	5	SURG	CORONARY BYPASS W/O CARDIAC CATH	4.2005	4.1974	-0.1
108	5	SURG	OTHER CARDIOTHORACIC PROCEDURES	5.8690	6.1081	4.1
109	.		NO LONGER VALID	NV	NV	NV
110	5	SURG	MAJOR CARDIOVASCULAR PROCEDURES WITH CC	4.0494	4.0796	0.7
111	5	SURG	MAJOR CARDIOVASCULAR PROCEDURES W/O CC	2.3214	2.3024	-0.8
112	5	SURG	PERCUTANEOUS CARDIOVASCULAR PROCEDURES	1.9736	1.9881	0.7
113	5	SURG	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB & TOE	2.7931	2.7765	-0.6
114	5	SURG	UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDER	1.5631	1.5385	-1.6
115	5	SURG	PERM CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK	3.5886	3.5936	0.1
116	5	SURG	OTHER PERM CARDIAC PACEMAKER IMPLANT OR AICD LEAD OR GEN PROC	2.4248	2.4514	1.1
117	5	SURG	CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT	1.1328	1.1671	3.0
118	5	SURG	CARDIAC PACEMAKER DEVICE REPLACEMENT	1.5419	1.5582	1.1
119	5	SURG	VEIN LIGATION & STRIPPING	0.9834	0.9949	1.2
120	5	SURG	OTHER CIRCULATORY SYSTEM O.R. PROCEDURES	1.9626	1.9616	-0.1
121	5	MED	CIRCULATORY DISORDERS W AMI & C.V. COMP DISCH ALIVE	1.6017	1.6022	0.0
122	5	MED	CIRCULATORY DISORDERS W AMI W/O C.V. COMP DISCH ALIVE	1.1325	1.1292	-0.3
123	5	MED	CIRCULATORY DISORDERS W AMI, EXPIRED	1.4116	1.4286	1.2
124	5	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH & COMPLEX DIAG	1.2307	1.2657	2.8
125	5	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O COMPLEX DIAG	0.7960	0.8451	6.2
126	5	MED	ACUTE & SUBACUTE ENDOCARDITIS	2.7299	2.7724	1.6
127	5	MED	HEART FAILURE & SHOCK	1.0234	1.0239	0.0
128	5	MED	DEEP VEIN THROMBOPHLEBITIS	0.7825	0.7820	-0.1

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
129	5	MED	CARDIAC ARREST, UNEXPLAINED	1.1959	1.1308	-5.4
130	5	MED	PERIPHERAL VASCULAR DISORDERS WITH CC	0.9042	0.9177	1.5
131	5	MED	PERIPHERAL VASCULAR DISORDERS W/O CC	0.5831	0.5889	1.0
132	5	MED	ATHEROSCLEROSIS WITH CC	0.7594	0.7296	-3.9
133	5	MED	ATHEROSCLEROSIS W/O CC	0.5257	0.5348	1.7
134	5	MED	HYPERTENSION	0.5614	0.5761	2.6
135	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE >17 WITH CC	0.8609	0.8507	-1.2
136	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE > 17 W/O CC	0.5489	0.5600	2.0
137	5	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE 0-17	0.6530	0.6578	0.7
138	5	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS WITH CC	0.8038	0.7964	-0.9
139	5	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC	0.4946	0.4939	-0.1
140	5	MED	ANGINA PECTORIS	0.6241	0.6258	0.3
141	5	MED	SYNCOPE & COLLAPSE WITH CC	0.7053	0.7025	-0.4
142	5	MED	SYNCOPE & COLLAPSE W/O CC	0.5150	0.5174	0.5
143	5	MED	CHEST PAIN	0.5189	0.5169	-0.4
144	5	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES WITH CC	1.0659	1.0580	-0.7
145	5	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC	0.6122	0.6155	0.5
146	6	SURG	RECTAL RESECTION WITH CC	2.4955	2.5367	1.7
147	6	SURG	RECTAL RESECTION W/O CC	1.5328	1.5469	0.9
148	6	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES WITH CC	3.1719	3.2220	1.6
149	6	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.5127	1.5022	-0.7
150	6	SURG	PERITONEAL ADHESIOLYSIS WITH CC	2.5505	2.5652	0.6
151	6	SURG	PERITONEAL ADHESIOLYSIS W/O CC	1.1738	1.1814	0.6
152	6	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES WITH CC	1.7955	1.7829	-0.7
153	6	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.0821	1.1151	3.0
154	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE >17 WITH CC	4.1338	4.1740	1.0
155	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE >17 W/O CC	1.3811	1.3898	0.6
156	6	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE 0-17	0.8668	0.8732	0.7
157	6	SURG	ANAL & STOMAL PROCEDURES WITH CC	1.0048	1.0320	2.7
158	6	SURG	ANAL & STOMAL PROCEDURES W/O CC	0.5100	0.5445	6.8
159	6	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 WITH CC	1.0901	1.1066	1.5
160	6	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 W/O CC	0.6378	0.6574	3.1

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
161	6	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 WITH CC	0.8260	0.9053	9.6
162	6	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 W/O CC	0.4823	0.5156	6.9
163	6	SURG	HERNIA PROCEDURES AGE 0-17	0.6795	0.7275	7.1
164	6	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG WITH CC	2.1679	2.1645	-0.2
165	6	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC	1.2055	1.1976	-0.7
166	6	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG WITH CC	1.3413	1.3465	0.4
167	6	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W/O CC	0.7801	0.7828	0.3
168	3	SURG	MOUTH PROCEDURES WITH CC	1.0321	1.0856	5.2
169	3	SURG	MOUTH PROCEDURES W/O CC	0.5824	0.6149	5.6
170	6	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES WITH CC	2.7524	2.7813	1.0
171	6	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC	1.0894	1.0638	-2.3
172	6	MED	DIGESTIVE MALIGNANCY WITH CC	1.3063	1.2990	-0.6
173	6	MED	DIGESTIVE MALIGNANCY W/O CC	0.6318	0.6262	-0.9
174	6	MED	G.I. HEMORRHAGE WITH CC	0.9657	0.9726	0.7
175	6	MED	G.I. HEMORRHAGE W/O CC	0.5354	0.5359	0.1
176	6	MED	COMPLICATED PEPTIC ULCER	1.0453	1.0436	-0.2
177	6	MED	UNCOMPLICATED PEPTIC ULCER WITH CC	0.7986	0.8062	1.0
178	6	MED	UNCOMPLICATED PEPTIC ULCER W/O CC	0.5804	0.5807	0.1
179	6	MED	INFLAMMATORY BOWEL DISEASE	1.1072	1.1143	0.6
180	6	MED	G.I. OBSTRUCTION WITH CC	0.9180	0.9139	-0.4
181	6	MED	G.I. OBSTRUCTION W/O CC	0.4969	0.4975	0.1
182	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 WITH CC	0.7617	0.7685	0.9
183	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 W/O CC	0.5291	0.5356	1.2
184	6	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE 0-17	0.4735	0.4240	-10.5
185	3	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE >17	0.8248	0.8312	0.8
186	3	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE 0-17	0.4251	0.4282	0.7
187	3	MED	DENTAL EXTRACTIONS & RESTORATIONS	0.5852	0.6350	8.5
188	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 WITH CC	1.0050	1.0201	1.5
189	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 W/O CC	0.4775	0.5027	5.3
190	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	0.7577	0.6707	-11.5
191	7	SURG	PANCREAS, LIVER & SHUNT PROCEDURES WITH CC	4.3319	4.4176	2.0
192	7	SURG	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC	1.6460	1.7609	7.0

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
193	7	SURG	BILIARY TRACT PROC W CC EXCEPT ONLY CHOLECYST W OR W/O C.D.E.	3.0940	3.1497	1.8
194	7	SURG	BILIARY TRACT PROC W/O CC EXCEPT ONLY CHOLECYST W OR W/O C.D.E.	1.5991	1.6562	3.6
195	7	SURG	CHOLECYSTECTOMY WITH C.D.E. WITH CC	2.4066	2.4576	2.1
196	7	SURG	CHOLECYSTECTOMY WITH C.D.E. W/O CC	1.5073	1.4861	-1.4
197	7	SURG	CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE, W/O C.D.E., WITH CC	2.0082	2.0796	3.6
198	7	SURG	CHOLECYSTECTOMY EXCEPT BY LAPAROSCOPE, W/O C.D.E., W/O CC	1.0432	1.0930	4.8
199	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.3557	2.3603	0.2
200	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.8054	2.9698	5.9
201	7	SURG	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES	3.1526	3.2322	2.5
202	7	MED	CIRRHOSIS & ALCOHOLIC HEPATITIS	1.3176	1.3087	-0.7
203	7	MED	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS	1.2180	1.2384	1.7
204	7	MED	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	1.1302	1.1376	0.7
205	7	MED	DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA WITH CC	1.2470	1.2284	-1.5
206	7	MED	DISORDERS OF LIVER EXCEPT MALIG, CIRR, ALC HEPA W/OCC	0.6181	0.6220	0.6
207	7	MED	DISORDERS OF THE BILIARY TRACT WITH CC	0.9896	1.0063	1.7
208	7	MED	DISORDERS OF THE BILIARY TRACT W/O CC	0.5521	0.5661	2.5
209	8	SURG	MAJOR JOINT & LIMB REATTACHMENT PROCEDURES-LOWER EXTREMITY	2.3491	2.3173	-1.4
210	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 WITH CC	1.8702	1.8427	-1.5
211	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 W/O CC	1.3031	1.2990	-0.3
212	8	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	1.4486	0.9084	-37.3
213	8	SURG	AMPUTATION FOR MUSCULOSKELETAL SYSTEM & CONN TISSUE DISORDERS	1.7485	1.7234	-1.4
214	8	SURG	BACK & NECK PROCEDURES WITH CC	1.8857	1.9237	2.0
215	8	SURG	BACK & NECK PROCEDURES W/O CC	1.0926	1.0977	0.5
216	8	SURG	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	2.0570	2.1046	2.3
217	8	SURG	WND DEBRID & SKIN GRAFT EXCEPT HAND, FOR MUSCSKELET & CONN TISS DIS	3.0563	3.0084	-1.6
218	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE >17 WITH	1.4195	1.4028	-1.2
219	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE >17 W/O CC	0.9015	0.9132	1.3
220	8	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP, FOOT, FEMUR AGE 0-17	0.9556	0.9626	0.7
221	8	SURG	KNEE PROCEDURES WITH CC	1.7992	1.7911	-0.5
222	8	SURG	KNEE PROCEDURES W/O CC	0.9846	0.9852	0.1
223	8	SURG	MAJOR SHOULDER/ELBOW PROC, OR OTHER UPPER EXTREMITY PROC WITH CC	0.8126	0.8162	0.4
224	8	SURG	SHOULDER, ELBOW OR FOREARM PROC, EXC MAJOR JOINT PROC W/O CC	0.6698	0.6932	3.5

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
225	8	SURG	FOOT PROCEDURES	0.8568	0.9006	5.1
226	8	SURG	SOFT TISSUE PROCEDURES WITH CC	1.3096	1.3381	2.2
227	8	SURG	SOFT TISSUE PROCEDURES W/O CC	0.6866	0.6999	1.9
228	8	SURG	MAJOR THUMB OR JOINT PROC, OR OTH HAND OR WRIST PROC WITH CC	0.8225	0.8409	2.2
229	8	SURG	HAND OR WRIST PROC, EXCEPT MAJOR JOINT PROC, W/O CC	0.5679	0.5964	5.0
230	8	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES OF HIP & FEMUR	0.9353	0.9145	-2.2
231	8	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES EXCEPT HIP & FEMUR	1.1159	1.1275	1.0
232	8	SURG	ARTHROSCOPY	1.1082	1.1560	4.3
233	8	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC WITH CC	1.8454	1.9051	3.2
234	8	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC	0.9321	0.9529	2.2
235	8	MED	FRACTURES OF FEMUR	0.9730	0.8964	-7.9
236	8	MED	FRACTURES OF HIP & PELVIS	0.7922	0.7772	-1.9
237	8	MED	SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH	0.5536	0.5535	0.0
238	8	MED	OSTEOMYELITIS	1.5082	1.4939	-0.9
239	8	MED	PATHOLOGICAL FRACTURES & MUSCULOSKELETAL & CONN TISS MALIGNANCY	1.0388	1.0338	-0.5
240	8	MED	CONNECTIVE TISSUE DISORDERS WITH CC	1.1488	1.1889	3.5
241	8	MED	CONNECTIVE TISSUE DISORDERS W/O CC	0.5682	0.5835	2.7
242	8	MED	SEPTIC ARTHRITIS	1.1356	1.1440	0.7
243	8	MED	MEDICAL BACK PROBLEMS	0.7011	0.7122	1.6
244	8	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES WITH CC	0.7437	0.7346	-1.2
245	8	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES W/O CC	0.4798	0.4813	0.3
246	8	MED	NON-SPECIFIC ARTHROPATHIES	0.5962	0.5529	-7.3
247	8	MED	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE	0.5547	0.5532	-0.3
248	8	MED	TENDONITIS, MYOSITIS & BURSITIS	0.6939	0.7117	2.6
249	8	MED	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	0.6638	0.6486	-2.3
250	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 WITH CC	0.7174	0.6950	-3.1
251	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 W/O CC	0.4449	0.4510	1.4
252	8	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE 0-17	0.3615	0.3642	0.7
253	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE >17 WITH CC	0.7706	0.7617	-1.2
254	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE >17 W/O CC	0.4272	0.4324	1.2
255	8	MED	FX, SPRN, STRN & DISL OF UPARM, LOWLEG EX FOOT AGE 0-17	0.4796	0.4831	0.7
256	8	MED	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	0.6366	0.6397	0.5

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
257	9	SURG	TOTAL MASTECTOMY FOR MALIGNANCY WITH CC	0.8845	0.8843	0.0
258	9	SURG	TOTAL MASTECTOMY FOR MALIGNANCY W/O CC	0.6959	0.6989	0.4
259	9	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY WITH CC	0.8372	0.8291	-1.0
260	9	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY W/O CC	0.5743	0.5840	1.7
261	9	SURG	BREAST PROC FOR NON-MALIGNANCY EXCEPT BIOPSY & LOCAL EXCISION	0.7272	0.7432	2.2
262	9	SURG	BREAST BIOPSY & LOCAL EXCISION FOR NON-MALIGNANCY	0.6071	0.6491	6.9
263	9	SURG	SKIN GRAFT &/OR DEBRID FOR SKIN ULCER OR CELLULITIS WITH CC	2.4460	2.3540	-3.8
264	9	SURG	SKIN GRAFT &/OR DEBRID FOR SKIN ULCER OR CELLULITIS W/O CC	1.2346	1.1663	-5.5
265	9	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS WITH CC	1.4065	1.3953	-0.8
266	9	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W/O CC	0.7108	0.7358	3.5
267	9	SURG	PERIANAL & PILONIDAL PROCEDURES	0.6592	0.6935	5.2
268	9	SURG	SKIN, SUBCUTANEOUS TISSUE & BREAST PLASTIC PROCEDURES	0.8198	0.8356	1.9
269	9	SURG	OTHER SKIN, SUBCUT TISS & BREAST PROC WITH CC	1.7166	1.7025	-0.8
270	9	SURG	OTHER SKIN, SUBCUT TISS & BREAST PROC W/O CC	0.6456	0.6610	2.4
271	9	MED	SKIN ULCERS	1.1783	1.1343	-3.7
272	9	MED	MAJOR SKIN DISORDERS WITH CC	1.0206	1.0072	-1.3
273	9	MED	MAJOR SKIN DISORDERS W/O CC	0.6514	0.6339	-2.7
274	9	MED	MALIGNANT BREAST DISORDERS WITH CC	1.1183	1.1084	-0.9
275	9	MED	MALIGNANT BREAST DISORDERS W/O CC	0.5050	0.5132	1.6
276	9	MED	NON-MALIGNANT BREAST DISORDERS	0.6351	0.6137	-3.4
277	9	MED	CELLULITIS AGE >17 WITH CC	0.8917	0.8804	-1.3
278	9	MED	CELLULITIS AGE >17 W/O CC	0.5828	0.5850	0.4
279	9	MED	CELLULITIS AGE 0-17	0.7618	0.6708	-11.9
280	9	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 WITH CC	0.6755	0.6729	-0.4
281	9	MED	TRAUMA TO THE SKIN SUBCUT TISS & BREAST AGE >17 W/O CC	0.4195	0.4344	3.6
282	9	MED	TRAUMA TO THE SKIN SUBCUT TISS & BREAST AGE 0-17	0.3540	0.3566	0.7
283	9	MED	MINOR SKIN DISORDERS WITH CC	0.7253	0.7155	-1.4
284	9	MED	MINOR SKIN DISORDERS W/O CC	0.4469	0.4342	-2.8
285	10	SURG	AMPUTAT OF LOWER LIMB FOR ENDOC, NUTRIT, & METABOL DISORDERS	2.5637	2.5270	-1.4
286	10	SURG	ADRENAL & PITUITARY PROCEDURES	2.2821	2.2621	-0.9
287	10	SURG	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT, & METAB DISORDER	2.1927	2.1035	-4.1
288	10	SURG	O.R. PROCEDURES FOR OBESITY	2.0725	1.9030	-8.2

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
289	10	SURG	PARATHYROID PROCEDURES	0.9920	1.0063	1.4
290	10	SURG	THYROID PROCEDURES	0.7637	0.7931	3.8
291	10	SURG	THYROGLOSSAL PROCEDURES	0.5074	0.5102	0.6
292	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC WITH CC	2.7658	2.7197	-1.7
293	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC	1.1010	1.1604	5.4
294	10	MED	DIABETES AGE >35	0.7466	0.7463	0.0
295	10	MED	DIABETES AGE 0-35	0.7562	0.7433	-1.7
296	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 WITH CC	0.9313	0.9179	-1.4
297	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 W/O CC	0.5244	0.5305	1.2
298	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE 0-17	0.5627	0.5421	-3.7
299	10	MED	INBORN ERRORS OF METABOLISM	0.8271	0.8118	-1.8
300	10	MED	ENDOCRINE DISORDERS WITH CC	1.0982	1.0982	0.0
301	10	MED	ENDOCRINE DISORDERS W/O CC	0.5777	0.6003	3.9
302	11	SURG	KIDNEY TRANSPLANT	3.8871	4.1394	6.5
303	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROCEDURES FOR NEOPLASM	2.5929	2.5739	-0.7
304	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROC FOR NON-NEOPL WITH CC	2.3897	2.3313	-2.4
305	11	SURG	KIDNEY, URETER & MAJOR BLADDER PROC FOR NON-NEOPL W/O CC	1.1127	1.1366	2.1
306	11	SURG	PROSTATECTOMY WITH CC	1.2474	1.2101	-3.0
307	11	SURG	PROSTATECTOMY W/O CC	0.6620	0.6619	0.0
308	11	SURG	MINOR BLADDER PROCEDURES WITH CC	1.4452	1.4465	0.1
309	11	SURG	MINOR BLADDER PROCEDURES W/O CC	0.7580	0.7971	5.2
310	11	SURG	TRANSURETHRAL PROCEDURES WITH CC	0.9006	0.9159	1.7
311	11	SURG	TRANSURETHRAL PROCEDURES W/O CC	0.5206	0.5395	3.6
312	11	SURG	URETHRAL PROCEDURES, AGE >17 WITH CC	0.8334	0.8458	1.5
313	11	SURG	URETHRAL PROCEDURES, AGE >17 W/O CC	0.4551	0.4774	4.9
314	11	SURG	URETHRAL PROCEDURES, AGE 0-17	0.4470	0.4503	0.7
315	11	SURG	OTHER KIDNEY & URINARY TRACT O.R. PROCEDURES	2.0341	2.0323	-0.1
316	11	MED	RENAL FAILURE	1.2903	1.2840	-0.5
317	11	MED	ADMIT FOR RENAL DIALYSIS	0.5194	0.5149	-0.9
318	11	MED	KIDNEY & URINARY TRACT NEOPLASMS WITH CC	1.1215	1.1196	-0.2
319	11	MED	KIDNEY & URINARY TRACT NEOPLASMS W/O CC	0.5298	0.5530	4.4
320	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 WITH CC	0.9677	0.9451	-2.3

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
321	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 W/O CC	0.6112	0.6109	0.0
322	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE 0-17	0.4952	0.5464	10.3
323	11	MED	URINARY STONES WITH CC &/OR ESW LITHOTRIPSY	0.7290	0.7221	-0.9
324	11	MED	URINARY STONES W/O CC	0.3864	0.3872	0.2
325	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 WITH CC	0.6607	0.6476	-2.0
326	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 W/O CC	0.4024	0.4186	4.0
327	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE 0-17	0.7169	0.7222	0.7
328	11	MED	URETHRAL STRICTURE AGE >17 WITH CC	0.6597	0.6732	2.0
329	11	MED	URETHRAL STRICTURE AGE >17 W/O CC	0.3881	0.4291	10.6
330	11	MED	URETHRAL STRICTURE AGE 0-17	0.2882	0.2903	0.7
331	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 WITH CC	0.9829	0.9943	1.2
332	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 W/O CC	0.5430	0.6019	10.8
333	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE 0-17	0.9641	1.0377	7.6
334	12	SURG	MAJOR MALE PELVIC PROCEDURES WITH CC	1.7535	1.7172	-2.1
335	12	SURG	MAJOR MALE PELVIC PROCEDURES W/O CC	1.3630	1.3447	-1.3
336	12	SURG	TRANSURETHRAL PROSTATECTOMY WITH CC	0.8540	0.8523	-0.2
337	12	SURG	TRANSURETHRAL PROSTATECTOMY W/O CC	0.6050	0.6130	1.3
338	12	SURG	TESTES PROCEDURES, FOR MALIGNANCY	0.9395	0.9738	3.7
339	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE >17	0.8093	0.8265	2.1
340	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE 0-17	0.4483	0.4516	0.7
341	12	SURG	PENIS PROCEDURES	0.9646	1.0192	5.7
342	12	SURG	CIRCUMCISION AGE >17	0.5848	0.6689	14.4
343	12	SURG	CIRCUMCISION AGE 0-17	0.3916	0.3945	0.7
344	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	1.0183	0.9941	-2.4
345	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIGNANCY	0.7344	0.7521	2.4
346	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, WITH CC	0.9338	0.9598	2.8
347	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, W/O CC	0.4928	0.4899	-0.6
348	12	MED	BENIGN PROSTATIC HYPERTROPHY WITH CC	0.6856	0.6724	-1.9
349	12	MED	BENIGN PROSTATIC HYPERTROPHY W/O CC	0.3904	0.4094	4.9
350	12	MED	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	0.6668	0.6787	1.8
351	12	MED	STERILIZATION, MALE	0.3447	0.3472	0.7
352	12	MED	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	0.5326	0.5807	9.0

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
353	13	SURG	PELVIC EVISCERATION, RADICAL HYSTERECTOMY & RADICAL VULVECTOMY	1.9624	1.8865	-3.9
354	13	SURG	UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG WITH CC	1.3794	1.3747	-0.3
355	13	SURG	UTERINE, ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC	0.8717	0.8773	0.6
356	13	SURG	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	0.7096	0.7162	0.9
357	13	SURG	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIGN	2.3153	2.2834	-1.4
358	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY WITH CC	1.1042	1.1018	-0.2
359	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC	0.7834	0.7987	2.0
360	13	SURG	VAGINA, CERVIX & VULVA PROCEDURES	0.8126	0.8186	0.7
361	13	SURG	LAPAROSCOPY & INCISIONAL TUBAL INTERRUPTION	1.0037	1.1047	10.1
362	13	SURG	ENDOSCOPIC TUBAL INTERRUPTION	0.5151	0.5189	0.7
363	13	SURG	D&C, CONIZATION & RADIO-IMPLANT, FOR MALIGNANCY	0.6340	0.6470	2.1
364	13	SURG	D&C, CONIZATION EXCEPT FOR MALIGNANCY	0.5930	0.6239	5.2
365	13	SURG	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.7034	1.7127	0.5
366	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM WITH CC	1.1948	1.2111	1.4
367	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC	0.4769	0.4486	-5.9
368	13	MED	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	0.9489	0.9704	2.3
369	13	MED	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	0.5201	0.5095	-2.0
370	14	SURG	CESAREAN SECTION WITH CC	0.8699	0.8976	3.2
371	14	SURG	CESAREAN SECTION W/O CC	0.6289	0.6340	0.8
372	14	MED	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES	0.5174	0.4902	-5.3
373	14	MED	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	0.3247	0.3387	4.3
374	14	SURG	VAGINAL DELIVERY WITH STERILIZATION &/OR D&C	0.5859	0.6152	5.0
375	14	SURG	VAGINAL DELIVERY WITH O.R. PROC EXCEPT STERIL &/OR D&C	0.7049	0.7101	0.7
376	14	MED	POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE	0.3894	0.3513	-9.8
377	14	SURG	POSTPARTUM & POST ABORTION DIAGNOSES WITH O.R. PROCEDURE	0.8600	0.9762	13.5
378	14	MED	ECTOPIC PREGNANCY	0.7580	0.7052	-7.0
379	14	MED	THREATENED ABORTION	0.3346	0.3204	-4.2
380	14	MED	ABORTION W/O D&C	0.2958	0.3481	17.7
381	14	SURG	ABORTION WITH D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	0.3943	0.4063	3.0
382	14	MED	FALSE LABOR	0.1240	0.1856	49.7
383	14	MED	OTHER ANTEPARTUM DIAGNOSES WITH MEDICAL COMPLICATIONS	0.4059	0.4060	0.0
384	14	MED	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	0.2620	0.2909	11.0

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
385	15	MED	NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.2648	1.2741	0.7
386	15	MED	EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	3.7722	3.7999	0.7
387	15	MED	PREMATURITY WITH MAJOR PROBLEMS	1.8889	1.9028	0.7
388	15	MED	PREMATURITY W/O MAJOR PROBLEMS	1.1965	1.2053	0.7
389	15	MED	FULL TERM NEONATE WITH MAJOR PROBLEMS	1.5295	1.2972	-15.2
390	15	MED	NEONATE WITH OTHER SIGNIFICANT PROBLEMS	0.9165	0.5385	-41.2
391	15	MED	NORMAL NEWBORN	0.2294	0.2311	0.7
392	16	SURG	SPLENECTOMY AGE >17	3.3043	3.2021	-3.1
393	16	SURG	SPLENECTOMY AGE 0-17	1.5723	1.5839	0.7
394	16	SURG	OTHER O.R. PROCEDURES OF THE BLOOD AND BLOOD FORMING ORGANS	1.6781	1.5713	-6.4
395	16	MED	RED BLOOD CELL DISORDERS AGE >17	0.8057	0.8118	0.8
396	16	MED	RED BLOOD CELL DISORDERS AGE 0-17	0.3079	0.2859	-7.1
397	16	MED	COAGULATION DISORDERS	1.2292	1.2490	1.6
398	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS WITH CC	1.2431	1.2139	-2.3
399	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC	0.6822	0.6723	-1.5
400	17	SURG	LYMPHOMA & LEUKEMIA WITH MAJOR O.R. PROCEDURE	2.5309	2.5674	1.4
401	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA WITH OTHER O.R. PROC WITH CC	2.3778	2.4043	1.1
402	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA WITH OTHER O.R. PROC W/O CC	0.8850	0.9212	4.1
403	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA WITH CC	1.6757	1.6956	1.2
404	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC	0.7377	0.7571	2.6
405	17	MED	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE 0-17	1.0761	1.0840	0.7
406	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC WITH CC	2.6133	2.6496	1.4
407	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R. PROC W/O CC	1.1204	1.1262	0.5
408	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R. PROC	1.4241	1.5586	9.4
409	17	MED	RADIOTHERAPY	0.9922	0.9785	-1.4
410	17	MED	CHEMOTHERAPY WITHOUT ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS	0.6679	0.6749	1.0
411	17	MED	HISTORY OF MALIGNANCY W/O ENDOSCOPY	0.4152	0.4476	7.8
412	17	MED	HISTORY OF MALIGNANCY WITH ENDOSCOPY	0.4758	0.4515	-5.1
413	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG WITH CC	1.3849	1.3595	-1.8
414	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC	0.7091	0.6704	-5.5
415	18	SURG	O.R. PROCEDURE FOR INFECTIOUS & PARASITIC DISEASES	3.5723	3.5136	-1.6
416	18	MED	SEPTECEMIA AGE >17	1.5141	1.4927	-1.4

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
417	18	MED	SEPTECEMIA AGE 0-17	0.7002	1.4250	103.5
418	18	MED	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS	0.9665	0.9628	-0.4
419	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 WITH CC	0.9511	0.9293	-2.3
420	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 W/O CC	0.6365	0.6368	0.0
421	18	MED	VIRAL ILLNESS AGE >17	0.6758	0.6868	1.6
422	18	MED	VIRAL ILLNESS & FEVER OF UNKNOWN ORIGIN AGE 0-17	0.5888	0.5859	-0.5
423	18	MED	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES	1.6246	1.5846	-2.5
424	19	SURG	O.R. PROCEDURE WITH PRINCIPAL DIAGNOSES OF MENTAL ILLNESS	2.4684	2.5573	3.6
425	19	MED	ACUTE ADJUST REACT & DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	0.7127	0.7079	-0.7
426	19	MED	DEPRESSIVE NEUROSES	0.6128	0.5960	-2.7
427	19	MED	NEUROSES EXCEPT DEPRESSIVE	0.6184	0.5969	-3.5
428	19	MED	DISORDERS OF PERSONALITY & IMPULSE CONTROL	0.7084	0.7521	6.2
429	19	MED	ORGANIC DISTURBANCES & MENTAL RETARDATION	0.9379	0.9269	-1.2
430	19	MED	PSYCHOSES	0.9153	0.8980	-1.9
431	19	MED	CHILDHOOD MENTAL DISORDERS	0.6980	0.6316	-9.5
432	19	MED	OTHER MENTAL DISORDER DIAGNOSES	0.7357	0.7538	2.5
433	20	MED	ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA	0.3512	0.3356	-4.4
434	20	MED	ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT WITH CC	0.7321	0.7235	-1.2
435	20	MED	ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT W/O CC	0.4529	0.4372	-3.5
436	20	MED	ALC/DRUG DEPENDENCE WITH REHABILITATION THERAPY	0.9691	0.9156	-5.5
437	20	MED	ALC/DRUG DEPENDENCE, COMBINED REHAB & DETOX THERAPY	0.9970	0.9021	-9.5
438			NO LONGER VALID	NV	NV	NV
439	21	SURG	SKIN GRAFTS FOR INJURIES	1.3853	1.3295	-4.0
440	21	SURG	WOUND DEBRIDEMENTS FOR INJURIES	1.7125	1.7495	2.2
441	21	SURG	HAND PROCEDURES FOR INJURIES	0.7122	0.7840	10.1
442	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES WITH CC	1.9292	2.0135	4.4
443	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES W/O CC	0.7398	0.7547	2.0
444	21	MED	TRAUMATIC INJURY AGE >17 WITH CC	0.7431	0.7399	-0.4
445	21	MED	TRAUMATIC INJURY AGE >17 W/O CC	0.4635	0.4640	0.1
446	21	MED	TRAUMATIC INJURY AGE 0-17	0.4959	0.4995	0.7
447	21	MED	ALLERGIC REACTIONS AGE >17	0.4869	0.4676	-4.0
448	21	MED	ALLERGIC REACTIONS AGE 0-17	0.3588	0.3614	0.7

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
449	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 WITH CC	0.7929	0.7801	-1.6
450	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 W/O CC	0.4224	0.4168	-1.3
451	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE 0-17	1.0266	1.0341	0.7
452	21	MED	COMPLICATIONS OF TREATMENT WITH CC	0.8232	0.8577	4.2
453	21	MED	COMPLICATIONS OF TREATMENT W/O CC	0.4177	0.4355	4.3
454	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG WITH CC	0.9107	0.8864	-2.7
455	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG W/O CC	0.4166	0.4379	5.1
456	22	MED	BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	2.1688	2.1721	0.2
457	22	MED	EXTENSIVE BURNS W/O O.R. PROCEDURE	1.6312	1.6307	0.0
458	22	SURG	NON-EXTENSIVE BURNS WITH SKIN GRAFT	3.7459	3.5089	-6.3
459	22	SURG	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT OR OTHER O.R. PROC	2.1042	1.7543	-16.6
460	22	MED	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.0508	1.0023	-4.6
461	23	SURG	O.R. PROC W DIAGNOSES OF OTHER CONTACT WITH HEALTH SERVICES	0.8656	0.9432	9.0
462	23	MED	REHABILITATION	1.7205	1.6623	-3.4
463	23	MED	SIGNS & SYMPTOMS WITH CC	0.7249	0.7170	-1.1
464	23	MED	SIGNS & SYMPTOMS W/O CC	0.4591	0.4740	3.2
465	23	MED	AFTERCARE W HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	0.3740	0.4464	19.4
466	23	MED	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	0.5516	0.5319	-3.6
467	23	MED	OTHER FACTORS INFLUENCING HEALTH STATUS	0.4168	0.3722	-10.7
468	.	SURG	EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	3.4842	3.5769	2.7
469	.		PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS	NV	NV	NV
470	.		UNGROUPABLE	NV	NV	NV
471	8	SURG	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY	3.8651	3.7499	-3.0
472	22	SURG	EXTENSIVE BURNS WITH O.R. PROCEDURE	11.6933	11.6375	-0.5
473	17	MED	ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE >17	3.5702	3.6120	1.2
474	.		NO LONGER VALID	NV	NV	NV
475	4	MED	RESPIRATORY SYSTEM DIAGNOSIS WITH VENTILATOR SUPPORT	3.7175	3.7005	-0.5
476	.	SURG	PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	2.2361	2.2327	-0.2
477	.	SURG	NON-EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	1.4628	1.5221	4.1
478	5	SURG	OTHER VASCULAR PROCEDURES WITH CC	2.1897	2.2227	1.5
479	5	SURG	OTHER VASCULAR PROCEDURES W/O CC	1.3027	1.3503	3.7
480	.	SURG	LIVER TRANSPLANT	19.4679	18.2581	-6.2

Appendix E. Change in DRG Relative Weights from Fiscal Year 1994 to Fiscal Year 1995

DRG	MDC	TYPE	TITLE	FY 1994 WEIGHT	FY 1995 WEIGHT	PERCENT CHANGE
481	.	SURG	BONE MARROW TRANSPLANT	14.3709	15.3076	6.5
482	.	SURG	TRACHEOSTOMY FOR FACE, MOUTH AND NECK DIAGNOSES	3.5756	3.6730	2.7
483	.	SURG	TRACHEOSTOMY EXCEPT FOR FACE, MOUTH AND NECK DIAGNOSES	16.9858	16.8772	-0.6
484	24	SURG	CRANIOTOMY FOR MULTIPLE SIGNIFICANT TRAUMA	5.6612	5.9807	5.6
485	24	SURG	LIMB REATTACH., HIP AND FEMUR PROCS FOR MULTI SIGN TRAUMA	3.2361	3.1540	-2.5
486	24	SURG	OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA	4.6756	4.9514	5.9
487	24	MED	OTHER MULTIPLE SIGNIFICANT TRAUMA	1.9379	1.9336	-0.2
488	25	SURG	HIV WITH EXTENSIVE O.R. PROCEDURE	4.3859	4.3854	0.0
489	25	MED	HIV WITH MAJOR RELATED CONDITION	1.8468	1.8158	-1.7
490	25	MED	HIV WITH OR W/O OTHER RELATED CONDITION	1.1174	1.0630	-4.9
491	8	SURG	MAJOR JOINT & LIMB REATTACHMENT PROCEDURES-UPPER EXTREMITY	1.6092	1.6235	0.9
492	17	MED	CHEMOTHERAPY WITH ACUTE LEUKEMIA AS SECONDARY DIAGNOSIS	3.5861	3.6804	2.6
493	7	SURG	LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. WITH CC	1.5268	1.5813	3.6
494	7	SURG	LAPAROSCOPIC CHOLECYSTECTOMY W/O C.D.E. W/O CC	0.8233	0.8462	2.8
495	.	SURG	LUNG TRANSPLANT	NC	12.8346	NC

NC Denotes a new DRG category defined for discharges occurring on or after October 1, 1994.
NV Denotes a DRG category that is not valid for classification and payment under PPS.

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